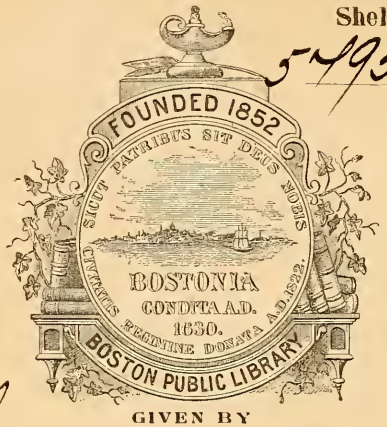


AN EXAMINATION

OF THE

QUESTION OF ANÆSTHESIA,

ARISING ON THE

MEMORIAL OF CHARLES THOMAS WELLS,

PRESENTED

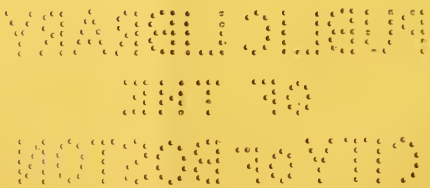
To the United States Senate, 2d Session, 32d Congress, and referred to a Select Committee, of which the Hon. ISAAC P. WALKER *is Chairman.*

PREPARED FOR THE INFORMATION OF SAID COMMITTEE.

ERRATA.

[Please make the following corrections before reading.]

Page 1, line 19—for senation read *sensation.*
3, 5—for propultion read *propulsion.*
3, 24—for anaæsthetic read *anæsthetic.*
3, 40—for anaæsthesia read *anæsthesia.*
5, 14—for insensibility read *sensibility.*
7, 14—for surgica read *surgical.*
7, 19—for promulgalted read *promulgated.*
7, 40—for exhiliarating read *exhilarating.*
8, 32—for paralised read *paralysed.*
9, 7—for anœsthetic read *anæsthetic.*
10, 6—for pretentions read *pretensions.*
10, 46—for 1847 read 1846.
16, 15—for rediculous read *ridiculous.*
16, 21—for enquiries read *inquiries.*
16, 30—for partumtion read *parturition.*
18, 25—for noting read *nothing.*
18, 50—for change read *charge.*
20, 4—for 1845 read 1848.
23, 28—for same read *some.*
26, 24—for occasioned read *occosional.*
31, 11—for exhiliarating read *exhilarating.*
31, 17—for carous read *carious.*
32, 14—for exhiliarating read *exhilarating.*
32, 50—for choose read *chose.*
36, 45—for Richardford read *Richardson.*
47, 2—for Amonia read *Ansonia.*
47, 3—for Amonia read *Ansonia.*
51, 16—for rapibly read *rapidly.*
51, 28—for slightes read *slightest.*
52, 12—for tistule read *testicle.*
53, 43—for fitness read *fickleness.*
61, 36—for it is opposed read *is opposed.*
67, 25—for utserly read *utterly.*



AN EXAMINATION

OF THE

QUESTION OF ANÆSTHESIA,

ON THE

MEMORIAL OF CHARLES THOMAS WELLS,

REFERRED

To a Select Committee of the Senate of the United States, of which Hon. Isaac P. Walker *is Chairman.*

It is admitted everywhere that to our country is due the high honor of having discovered and applied the means by which the human system can be safely and certainly rendered insensible to pain under surgical operations. These means are denominated "*Anæsthetic Agents*," and the state to which the system is reduced by their application is called "*Anæsthesia.*" This discovery has been received with great eclat throughout the civilized world, and is universally regarded as a priceless boon to humanity.

While there can be no doubt that the attainment of an object of such vast importance will ever constitute one of the brightest pages of American scientific history, and while the learned of Europe are unanimous in according to the western continent the conception and development of ideas so novel and marvellous, yet, unfortunately, a controversy has arisen among ourselves in regard to the authorship of this great achievement.

By the references of the Senate, the question is presented to this Committee, who of three citizens may justly be regarded as the originator of "*Anæsthesia*," and a public benefactor? Who first conceived the idea of paralyzing the nerves of senation, resorted to means adequate to that end, and by application and experiment demonstrated that it was attainable?

It is apparent from the papers before the Committee that there are three competitors for this high distinction. They are Charles T. Jackson and Wm. T. G. Morton, both of Boston, Massachusetts, and Charles Thomas Wells, in the name of his father, Horace Wells, late of Hartford, Connecticut, deceased. It is confidently alleged by each that he first discovered and brought into

practical use an adequate anæsthetic agent, and that on him should be conferred the honors and rewards which may be properly accorded to such an important discovery.

Before we proceed to examine, compare, and estimate the proofs, with the view to an enlightened appreciation of the question before us, it is indispensable that we should form a just conception of what constitutes a discovery, in respect to this and other analagous subjects.

It is believed to lay the foundation for just pretensions, it is indispensable that the party should have formed a distinct conception of anæsthesia, and should have at least substantially attained that end by good and satisfactory means. If to both of these elements he can add also that of priority, he must be regarded as the true discoverer, and his position as such will appear the stronger if he has given early and full publicity to his experiments.

A party can be entitled to no consideration, whose efforts have gone little beyond speculation, and who has not developed the leading idea, by application or use, or when the application has been of so imperfect a character as to indicate that he had formed no just conception of its practical bearing and value, or of the element or elements with which he has been dealing. Nor can a party who first carried useful or important *ideas*, like those of Anæsthesia, into practice, be denied the honors of discovery merely because others preceded him in speculation ; *and particularly* is this true where we have every reason to believe that the speculation was wholly unknown to the modern experimentor. Nothing is more common than to find, in the history of science, all or some of the leading elements of a great discovery adverted to, and stated with more or less precision. Sometimes one investigator will contribute one of these elements and another a modification of that element, or a different one, until, at length, some party more acute, sagacious, and observing, or, perhaps, more fortunate than his predecessors, will, from premises furnished (at least) in part by others, arrive, as by a flash, at some great result, and announce a discovery of startling magnitude, and deeply concerning the welfare of mankind, which has lain, for years, along the pathway of science.

Nor is it necessary to constitute a true discoverer in respect to any matter of nature or art, that he should have resorted, in the first instance, to the best means of development or use. The whole history of discovery and invention proves that nothing is more common than for one person to seize hold of some novel idea, susceptible of useful application, and to bring it forward by an agency competent to demonstrate its value and to arrest public attention, and then that many other minds, active, ingenious, and inventive, should be directed into the same channel of inquiry, pursuing the object proposed by the original discoveror or inventor with vigor and success, suggesting improvements, contriving substitutes, and introducing new agents, which carry the discovery,

invention, or art, far beyond the point at which it was left by the real author of the movement.

Unless these principles be admitted it would be impossible to do justice to any great public benefactor. The memory of Fulton, who applied the steam engine to the propultion of vessels, and of Whitney, who invented the cotton gin, would be cast into the shade.

It will be recollected that this is not a question of patent rights, where not only the primary inventor, but also the secondary is each, entitles to precisely what he invented. The first, for instance, to the machine, and to that only which he invented as an agent to apply some principle, and the latter to any improvement in that machine, or to an entirely different machine or agency, by which the same principle is made available in another and perhaps a better form. But it is a question of public benefaction, to be acknowledged by a national reward, bestowed on the party who may fairly be deemed the author or originator in a practical sense of anæsthesia. Mere experiments of verification, substitution, or improvement, cannot rise to the dignity of original discovery. If it were otherwise there could be no end to the pretensions that would be urged on Congress. The necessity of adopting this rule needs no other illustration than what arises out of the subject before us. If we assume that nitrous oxyd gas was the first anaæsthetic agent applied, then it would appear that no less than five substances have been used as substitutes for that agent, viz: the vapor of sulphuric ether in the first instance, by Wells and Marcy, at Hartford, and afterwards by Jackson and Morton, at Boston, chloroform by Prof. Simpson, at Edinburgh, cloric ether by Prof. Warren, at Boston, bromohydin ether by M. Robin, at Paris, and ter-chlorine of carbon by whom is to me unknown.

Are all the authors of these substitutes, or rather of their application, to be considered public benefactors, or is that one to be selected whose agent should, under all the circumstances, be deemed the best. If so, then he would be liable to be ousted from his position by a subsequent discovery of a better agent, and thus he who is a public benefactor to-day, may cease to be one to-morrow. Any other rule would involve us in an interminable controversy touching the comparitive value of different agents, as to which there would probably be as many opinions as there are practitioners of anaæsthesia. Besides, if the question is to be settled by the superiority of this agent over the other, then both Jackson and Morton must be driven from the field, as sulphuric ether has been everywhere superseded by chloroform and chloric ether; and Simpson, of Edinburg, who first applied the former, and Warren, of Boston, the latter, one or both, must carry off the palm.

That the solution of this controversy should turn on the principles here developed, will appear from a letter which has been addressed to me by the learned Professor Mütter, as follows:

Letter from Professor Thomas D. Mutter, of the city of Philadelphia.

"PHILADELPHIA, *December* 31, 1852.

"MY DEAR SIR: With every desire to aid you in your praiseworthy efforts to award the honor of the discovery to him who best deserves it, I have carefully examined into the history of anæsthesia, and regret to say that my investigations have resulted in the establishment of the fact that both Beddoes and Davy suggested, and even used nitrous oxyd gas with a view to this effect, long before Wells's claims to have made the discovery. The experiment, it is true, attracted but little notice, and was soon forgotten by the profession generally, and to America really belongs the honor of having brought to light the immense value of anæsthetic agents in the treatment of painful diseases or the performance of surgical operations. The question then presents itself who first revived the experiments of Beddoes and Davy, and brought the measure into general use. I use the word "revived," because I hold that no experiment of verification performed by another can deprive him who first suggestd the induction, and presented the process of verification, of the honor of original discovery. This position is sustained by the highest authorities in inductive science, and by numerous precedents.

"Now if it can be shown that Mr. Wells (I do not say that he did, as this is a question of which I know nothing positively) first demonstrated usefully and practically the fact that operations can be performed without pain, in consequence of the inhalation by the individual of some gaseous substance like nitrous oxyd gas or the vapor of ether, *then beyond all question* is he entitled to the honor and reward of having established one of the most valuable facts in the science of surgery. But he must still be considered only in the light of one who verifies the suggestion of another.

"The subsequent introduction by others of agents of a similar character, even although more efficient than those first employed does not at all diminish his claim to having established the great fact. If this were so, then might Dr. Simpson, of Edinburg, who first employed chloroform, or Dr. Warren, of Boston, who suggested chloric ether, or Mr. Robin, of Paris, who invented bromohydin ether, claim equal honor with him who first suggested the measure of anæsthesia.

"It appears to me, therefore, that the controversy should not turn upon the positive discovery of the measure in question, but rather upon the priority of establishing the induction by experiment.

"Hoping that in your wisdom the right may be made to prevail, I remain with high respect and consideration, yours, &c.,

"THOS. D. MUTTER.

"Hon. TRUMAN SMITH."

The question, then, is, which of these parties was the first to conceive the idea of making anæsthesia practical, and the first

to prosecute that idea by experiment to a successful result, he at the same time giving full publicity to both the one and the other. The necessity of rigidly applying the rules adverted to by Professor Mütter to the case before us, and of excluding the pretensions of all those who only treaded in the footsteps of the original experimenter, even though they aided in perfecting the new art by the introduction of superior agencies or improved processes of administration, must be apparent to every one who has any knowledge of the substances used, or who will attend to the proofs before the Committee. The truth is, that those substances, or rather two of them, viz: nitrous oxyd gas and sulphuric ether have long been known to the world, and have been nearly as long inhaled. They were known alike to deaden insensibility, occasion exhileration, and to produce substantially the same effects on the human system No one of these parties pretend to have changed the character of these substances, or to have combined with them any new element, causing them to produce a new effect. The administration was, as to both, by inhalation, long practiced and familiar to the world. Hence, on its being ascertained that one of the substances would paralyze the nerves of senation, the inference would instantly arise in every well informed mind, that the other would produce the same effect. To resort to one in place of the other would be a very humble effort of substitution, and would not require ingenuity, sagacity, or accuteness—in short, nothing but slender powers of observation and comparison. It is absurd to consider such a substitution as a high effort of genius, worthy of national recognition and reward. The positions here assumed can be abundantly sustained by evinence before the Committee, as follows:

Extract from the Deposition of Professor Abner Jackson, of Trinity College, Hartford, Connecticut.

"I further say that I had previously witnessed the influence of sulpheric ether upon the human system; and I know that the effect was very similar to that produced by the nitrous oxyd gas. It causes the same insensibility, but less exhileration. On being informed that nitrous oxyd gas would render the human system insensible under surgical or dental operations, any one well acquainted with the two substances would infer that ether might, and probably would produce the same effect as gas. In my judgment, the whole merit of the recent discoveries on this subject consists in finding out that there was in nature an agent that would produce this effect. And then the application or use of analagous agents would follow, of course. The person who first applied either nitrous oxyd gas, sulphuric ether, or chloroform, should, in my opinion, be regarded as the true discoverer, inasmuch as the use of the others would be a natural sequence. I declare my unhesitating belief that Dr. Wells was the first person to discover that one of these agents, to wit, nitrous oxyd gas would produce the effect indicated."

Extract from the Deposition of Professor Willard Parker, of the city of New York.

"While an accademical student at Cambridge (Mass.) I became acquainted with the influence and effect of nitrous oxyd gas upon the human system. In the Spring of 1831, during the course of public lectures in the Vermont Medical college, (then the clinical school of medicine) at Woodstock, Vermont, the students of my class after having used nitrous oxyd gas, prepared for them by the chemical Professor, took up the use of sulphuric ether, and they were in the habit of making themselves intoxicated and insensible by its inhalation. I finally checked them in the employment of the ether, fearing deleterious effects.

"I further say that I then observed that the operation and influence of the above agents when inhaled were very similar. It has long been known that nitrous oxyd gas, sulphuric ether, chloric ether and like substances would produce intoxication and even insensibility, but it was not known that these agents could be so employed as to suspend all sensibility during surgical operations, and that too with safety, until the discovery of the late Horce Wells. I further say, it being known that nitrous oxyd would produce anæsthesia in surgical operations, it would suggest to any one having any knowledge of the two substances that sulphuric ether would produce the same effect, and the substitution of the ether for the gas does not, in my opinion, merit the name of discovery. The merit should, in my judgment, be awarded to the man who first applied either of these agents for anæsthetic purposes, and I am very confident and strong in the opinion that that man was the late Horace Wells, of Hartford."

Extract from the Deposition of Professor John W. Francis, of the city of New York.

"At an early period of my medical career I became acquainted with the fact that several agents, as the nitrous oxyd gas, chloric ether, and other intoxicating substances, were capable of producing on the human constitution diminished sensibility, but anæsthesia, as now practiced, is of much more recent date—and I fully believe that the anæsthetic principle, by inhalation of gaseous substances, in surgical and other operations, was introduced and established first by the late Horace Wells. The well known sedative effects of sulphuric and other ethers might readly suggest to the scientific mind their substitution for the nitrous oxyd gas, and the application of any one of these agents might be fairly recognised as the primary discovery."

Extract from the deposition of Richard S. Kissam, M. D., of the city of New York.

After stating that he was a member of Washington, now Trinity college, Hartford, Connt., during the years 1826–'27, Dr. Kissam proceeds as follows:

"When in Washington college I frequently inhaled and saw others inhale the nitrous oxyd gas and the vapor of sulphuric ether. The effects on the mental manifestations and in the abolition of sensation were so similar as to render them almost identical as Pharmaceutical agents; if any preference was observed the nitrous oxyd appeared the most efficacious anæsthetic. And I further say that until the discovery of Horace Wells, late of Hartford, I did not know that any safe method was established for rendering the human system insensible to pain under surgical operations.

"I further state that in some visits to Hartford I became informed that the inhalation of nitrous oxyd gas was practiced by Horace Wells in surgical operations and this was sometime before the claims of Doctors Jackson and Morton were promulgated. These reminicences strongly impress my judgment in favor of the originality of Horace Wells as the discoverer of modern anæsthesia.

"This principle is now well established in surgical and obstetric practice. The agents are various, nitrous oxyd gas, sulphuric ether, chloric ether, chloroform, and some others not much used. In my opinion he who first applied and was known to apply either of those agents for the above purpose was the true discoverer of the principle and is entitled to all the credit thereof. I truly believe that Horace Wells anticipated all others in the application of anæsthetic agents."

Extract from the deposition of Isaac Hays, of the city of Philadelphia, one of the Surgeons of the Wills Hospital, and Editor of The American Journal of Medical Sciences.

"When a student of medicine, I several times saw the nitrous oxide gas exhibited, and observed its intoxicating and exhiliarating effects on the system, and it was well understood at that time that sulphuric ether was used to produce similar effects. It was said that boys were in the habit of inhaling the ether for its exhiliarating effects, and that the subject was adverted to in the papers of that time, and the boys were cautioned against its use as dangerous, but I believe that nothing was known of the anæsthetic effects of nitrous oxide gas or ether until within a few years, at least they were not used to produce that effect. I further say that it being established that nitrous oxide gas would produce anæsthetic effects, it would naturally suggest itself that sulphuric ether would produce the same effects, just as the establishment of the fact that sulphuric ether induced anæsthetic effects led to the trial of chloric ether, chloroform, ter-chloride of carbon, &c."

Extract from the deposition of Governeur Emerson, M. D., of city of Philadelphia.

"Early in my practice I saw the nitrous oxyd gas administered, and observed its effects upon the system. In the year 1824 the children and young people of this city took up the practice of inhaling sulphuric ether with the view to its exhiliarating effects and for their amusement. The practice was very extensive, though chiefly clandestine. Two deaths from this cause were reported in that year to the Board of Health, and a considerable number were made sick. I myself had two patients who were rendered ill from the cause above named. There appears to be a great similarity in the immediate effects resulting from the inhalation of the two substances. I have no knowledge that either were used for anesthetic purposes until the last few years. And I further say that from the similarity I observed in the effects of the gas and the vapor of ether, were I informed that one of them when inhaled produced insensibility during the performance of surgical operations, I should naturally infer that the same effects might be expected from the other. Any merit for the discovery of anæsthesia as now known, is, in my opinion, due to the one who first applied either of the agents for such purpose, it is immaterial which."

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There will be found in depositions by eminent physicians and surgeons, to be produced hereafter for other purposes, opinions in coincidence with those expressed above by Professors Francis, Parker, Jackson, and others, but we have enough to establish conclusively the proposition that there is no merit in substituting sulphuric ether for nitrous oxyde gas, as there certainly would have been none in substituting the gas for the ether. The truth is, this whole process is nothing but intoxication by inhalation, and when it was found out that one of the substances paralised sensation, the inference that the other would have the same effect was no more a discovery than a conclusion from brandy to gin would be were it ascertained that the same paralysis could be produced by imbibition or through the stomach.

We have, then, before us a mere question of priority ; and, fortunately, it is a question of fact in the simplest form—a question to which the mind of any plain, sensible person could address itself with entire success.

It is claimed on the part of Dr. Wells that he established the practicability of anæsthesia by causing one of his teeth to be extracted on the 11th of December, 1844, while he was under the influence of the nitrous oxyd gas ; that he gave immediate publicity to the result ; that he followed it up by experiments of verification, introducing it into his own extensive practice, and inducing other dentists in Hartford to adopt it in theirs, making incessant efforts to disseminate a knowledge of the new art, introducing improvements in the manufacture of gas, his apparatus and

process of administration, pursuing the subject with the utmost enthusiasm, and everywhere proclaiming that he would ere long convince the world that he had made a great discovery, and that within a brief space anæsthesia, as introduced by him, would become universal in dental and surgical practice.

On the part of Dr. Morton, it is not pretended he ever made an anœsthetic experiment until the 30th of September, 1846, nearly twenty-two months after Dr. Wells made his discovery, and after it had become public, and a subject of universal notoriety in Hartford. In his memoir to the Academy of Arts and Sciences at Paris, July, 1847, he admits that Dr. Jackson called his attention in the summer of 1844 to the sedative effects of ether by inhalation or direct application on the human system; and he says "I became satisfied that there was nothing new or particularly dangerous in the inhaling of ether, that it had long been the toy of professors and students, known as a powerful antispasmodic, anodyne, and narcotic, capable of intoxicating and stupifying when taken in sufficient quantity." He then goes on to say that during that summer he spent two months at the residence of his father-in-law, in Connecticut, and experimented on the inhalation of this substance by birds and other animals with "no satisfactory results." Returning to Boston, he resumed in the fall of 1844 his profession, and did not renew his trials of ether until the summer of 1846, he then made several experiments by inhalation first on two dogs, and finally on himself and one or two students; but in no instance, according to his own account of the matter, did he try the anæsthetic properties of this substance by the application of the knife or any other test until the 30th of September. On that day, as he states, he inhaled the ether from a handkerchief, and became insensible. He adds:

"Delighted with the success of this experiment, I immediately announced the result to the persons employed in my establishment, and waited impatiently for some one upon whom I could make a fuller trial. Towards evening, a man (Mr. Eben Frost) residing in Boston, whose certificate is in the appendix, came in suffering great pain, and wishing to have a tooth extracted. He was afraid of the operation, and asked if he could be mesmerized. I told him I had something better, and saturating my handkerchief, gave it to him to inhale. He became unconscious almost immediately. It was dark, and Dr. Hayden held the lamp, while I extracted a firmly rooted bicuspid tooth. There was not much alteration in the pulse, and no relaxation of the muscles. He recovered in a minute, and knew nothing of what had been done to him. He remained for some time talking about the experiment, and I took from him a certificate. This was on the 30th of September, 1846. This I consider to be the first demonstration of this new fact in science. I have heard of no one who can prove an earlier demonstration. If any one can do so, I yield to him the point of priority in time."

Whether Dr. Morton was justified in asserting, as he did to the Academy, that he had heard of no earlier demonstration of the new fact, as he calls it, or whether he was ignorant of the previous experiments and success of Dr. Wells, is a question which will be considered hereafter. But it is satisfactory to find him willing to have his pretentions turn on the question of priority. It remains to be seen whether in yielding that point he has not yielded the whole controversy.

On the part of Dr. Jackson, it is claimed that he conceived the idea of anæsthesia as early as the winter of 1841–'2. He alleges that he then accidentally inhaled some chlorine gas, which greatly inflamed his throat and lungs; and that to alleviate the pain he resorted to the vapor of sulphuric ether, which gave him great relief. In giving an account of this transaction he says:

"At first the ether made me cough, but soon that irritability ceased, and I noticed a sense of coolness, followed by warmth, fulness of the head and chest, with giddiness and exhilaration. Numbness of the feet and legs followed, and a swimming or floating sensation as if afloat in the air. This was accompanied with entire *loss of feeling*, even of contact with the chair in which I was seated. I noticed that all *pain had ceased in my throat*, and the sensations which I had were of the most agreeable kind. Much pleased and excited, I continued the inhalation of the ether vapor, and soon fell into a dreamy state, and then became unconscious of all surrounding things. I know not how long I remained in that state, but suppose it could not be less than a quarter of an hour, judging from the degree of dryness of the cloth, which, during this state of unconsciousness, had fallen from my mouth and nose and lay upon my breast. As I became conscious, I observed still there was no feeling of pain in my throat, and my limbs were still deeply benumbed, as if the nerves of sensation were fully paralyzed. A strange thrilling now began to be felt along the spine, but it was not in any way disagreeable; little by little sensation began to manifest itself, first in the throat and body, and gradually extended to the extremities, but it was some time before full sensation returned, and my throat became really painful.

"Reflecting upon these phenomena, the idea flashed into my mind that I had made the discovery I had been for so long a time in quest of—a means of rendering the nerves of sensation temporarily insensible to pain, so as to admit the performance of a surgical operation on an individual without his suffering pain therefrom."

Dr. Jackson insists that he never lost sight of this idea, but occasionally mentioned it to different individuals down to the fall of 1847, when he communicated it to Dr. Morton; gave him full instructions for the administration of the ether, and assumed the whole responsibility. On this hypothesis Dr. Morton is to be

deemed merely an instrument in the hands of Dr. Jackson, and is entitled to no credit whatever. But whether the experiment of the 30th be deemed an emination of the mind of the one or the other, Dr. Jackson does not pretend any more than Morton, that he made any practical use of his ideas before that date; that he caused any dental or surgical operation to be performed under the effect or influence of any anæsthetic agent, or made an avowal of the fact, or gave publicity to his discovery in any form. How far considerations such as these should invalidate the pretensions of Dr. Jackson to discovery prior to September 30th, will be considered hereafter.

Having thus presented, in terms as brief as possible, the claims of the respective parties, the question arises whether Dr. Wells did, in truth and in fact, make anæsthesia practical early in December, 1844. Did he undertake to render the system by inhalation of some gaseous or vapory substance, insensible to pain under dental or surgical operations; and did he succeed in the attempt? This, like other questions of facts, must be settled by proofs, and, fortunately, those before the committee are alike ample and satisfactory. Not a doubt can, it is believed, be entertained by any one who will give the subject a candid examination. These proofs may be conveniently arranged under the following heads:

I. First conception of the idea of anæsthesia by Dr. Wells, and verification of that idea by an experiment on himself.

Deposition of Linus P. Brockett, M. D., of Hartford, Connecticut.

"I, Linus P. Brockett, of the city and county of Hartford, and State of Connecticut, of lawful age, depose and say, that I am by profession a physician and surgeon; I have resided in this city since December, 1846. In the year 1840, I resided here from March or April till the first day of September, when I left to attend a course of medical lectures in New Haven, in this State.

"I knew the late Dr. H. Wells, of this city, intimately at the period last mentioned, and was in the habit of calling at his office frequently, as well to see Dr. Wells as a friend of mine—since deceased—then a student in Dr. H. Wells' office. Early in the spring of 1840, I had a large molar tooth extracted by Dr. Wells, which caused me much pain, as my teeth are firmly set. Some time in the summer following, namely, in 1840, in the month of July or August, I called at Dr. Wells' office and found him engaged in some experiment, which led to a conversation between Dr. Wells and myself respecting nitrous oxyd gas. Dr. Wells first spoke of the gas, and inquired of me if I had seen it administered. I replied that I had seen two or three persons inhale this gas, and described the effects upon them under its influence. We conversed upon this subject for some time, and Dr. Wells

remarked that he believed that a man might be made so drunk by this gas or some similar agent, that dental and other operations might be performed upon him without any sensation of pain on the part of the patient. And Dr. Wells added, that if we could make this experiment work, he should be able to extract a tooth for me without so much pain as the last operation caused me.

"Dr. Wells' mind seemed to me at that time to be impressed with the idea that some discovery would yet be made to prevent pain in dental operations.

"I am confident that the conversation took place in 1840, because I left the city in September following, and never saw Dr. Wells again till after my return to Hartford in December, 1646. In consequence of the conversation spoken of above, I have no doubt, and never entertained a doubt, that Dr. Wells was the true, original discoverer of an anæsthetic agent. I never heard any one in this city doubt Dr. Wells' priority in this discovery; though I have had many and frequent conversations on this subject. I have never heard the name of S. A. Cooley, in relation thereto, mentioned.

"Dated at Hartford, the 15th day of January, 1853.

"LINUS P. BROCKETT."

STATE OF CONNECTICUT, }
County of Hartford. }

HARTFORD, *January* 15, 1853.

The abovenamed Linus P. Brockett, to me known, personally appeared and made oath that the foregoing affidavit, by him subscribed, is true.

Before me,

HENRY L. RIDER,
Notary Public.

Extract from the deposition of David Clarke, of the city of Hartford, Connecticut.

"During the winter of 1844–'45, I attended an exhibition in Union Hall, in this city, (Hartford,) given by Mr. Colton of what was called laughing gas. It was administered to a number of young men, one of whom became much excited, and hit his limbs against the seats—those seats were placed to protect the audience from those who took the gas. It was remarked by a number of persons present he will hurt himself. When the influence had passed off, Dr. Wells, who stood near me, asked him if he had not hurt himself. He replied no, not as I know of. Dr. Wells said you must have done so, for you hit yourself against the benches. Almost immediately the young man pulled up his pants, and the blood was running down his limbs. The young man remarked, I did not feel any pain at the time. Wells turned to me and said, *I believe a man, by taking that gas, could have a tooth extracted or a limb amputated and not feel the pain.* I told him I

thought not. Some time, a month or two afterwards, I was in the office of Dr. Riggs, of this city, to have some dental work done, and Dr. Wells came in and said he had tried the gas; Dr. Riggs administered it to me, and extracted for me a large tooth without the least pain."

Extract from the Deposition of Elizabeth Wells, of Hartford, Connecticut.

"That I am the widow of Horace Wells, surgeon-dentist, late of said city of Hartford, deceased. We were married on the 9th day of July, A. D. 1838. We had one child, a son, now living, named Charles Thomas, who is now thirteen years of age. Dr. Wells, my husband, was a native of New Hampshire, and settled in said Hartford, as a dentist, some two years before our marriage. He had a large, extensive, and lucrative practice, which he pursued for several years, until he was obliged to abandon it on account of ill health. He possessed an inquiring mind, and was in the habit of making experiments, particularly on subjects that had a bearing on his profession. For some months previous to the delivery of a course of chemical lectures by Mr. G. Q. Colton, in the city of Hartford, December, 1844, Dr. Wells had turned his attention to the discovery of some means of rendering the human system insensible to pain under dental and surgical operations, and made several experiments in mesmerism with reference to that object. Towards the close of Mr. Colton's course of lectures, I went with my husband to witness an exhibition of the effects of inhaling nitrous oxyd, or laughing gas. It was in the evening, at Union Hall, in this city. My husband and several others took the gas in my presence, the effect of which on the parties occasioned much amusement to those present. When we came out of the lecture to return home, I reproached my husband for taking the gas and making himself ridiculous before a public assembly. He replied to me that he thought it might be used in extracting teeth, and in surgical operations, so as to prevent pain; and said he meant to try the experiment on himself the next day. And accordingly, he took the gas and had a tooth extracted the next day, and declared that he did not experience any pain. It was a wisdom tooth, and had troubled him a considerable length of time."

Extract from the Deposition of John M. Riggs, dentist, of Hartford, Connecticut.

"That I settled in Hartford as a surgeon-dentist in the fall of 1842, but I resided here two years before that, engaged in teaching and studying dentistry, and have ever since resided in said Hartford, in the practice of my profession. I was intimately ac-

quainted with the late Dr. H. Wells, who occupied an office immediately adjoining my own, and I was in the habit of daily and familiar intercourse with him. We were particular friends. In the month of December, 1844, Mr. G. Q. Colton delivered a course of lectures in this city, on which occasion he exhibited the nitrous oxyd, sometimes called "laughing gas." On the evening of the 10th of said December, Dr. Wells came into my office after Mr. Colton's lecture, and said that he and others had taken the above gas; and remarked that one of the persons had injured himself, and stated, after recovering from the effects of the gas, that he did not know at the time that he had sustained such injury. Dr. Wells then said: "He did not feel it; why cannot the gas be used in extracting teeth?" A long discussion then followed between Dr. Wells and myself upon that subject, the result of which was, Dr. Wells concluded to try on himself, on the ensuing day, the experiment of having a tooth extracted while under the influence of this gas. He said he had a tooth that occasioned him some inconvenience, and he would take the gas and have the tooth extracted, if I would perform the operation. And I agreed to do so, the next morning, remarking that it would be fair to commence the experiment upon ourselves. Accordingly, the next morning Dr. Wells came with Mr. Colton and his bag of gas to his, Dr. Wells's office, and called me in. There were present, besides Dr. Wells and myself, Mr. Colton, Mr. Samuel A. Cooley, and some others, whose names I cannot now recall. Dr. Wells, after seating himself in the operating chair, took the bag and inhaled the gas, and after he had been brought sufficiently under its influence, he threw back his head, and I extracted the tooth. It was a large molar tooth, in the upper jaw, such as is sometimes called a "wisdom tooth." It required great force to extract it. Dr. Wells did not manifest any sensibility to pain. He remained under the influence of the gas some time after, and immediately upon recovering from it, he swung his hands and exclaimed, "*A new era in tooth-pulling!*" He remarked he did not feel any pain from the operation.

Deposition of G. Q. Colton, of the city of New York.

"I, Gardner Q. Colton, of the city, county, and State of New York, of lawful age, having been duly cautioned and sworn, depose and say, that in the month of December, A. D. 1844, I delivered, in the city of Hartford, in the State of Connecticut, a course of lectures on chemistry and natural philosophy. I believe the first lecture was delivered on the 10th of December, in the year aforesaid, but how many I delivered I cannot now precisely say. I recollect to have administered the nitrous oxyd gas at one of the lectures, (which was in the evening, at Union Hall, in said city,) to Dr. Horace Wells, and other persons, whom I do not now remember. The succeeding day I was in the hall at work, pre-

paring for my next lecture, when Dr. Wells came in and asked whether the gas would not produce insensibility to pain when the party under its influence was subjected to a dental operation. Although I had been in the constant habit of administering the gas for more than a year previous, such an idea had not occurred to me, and I replied that I had never thought of the subject, and could not express an opinion. He said that he was inclined to think it would, and was so far satisfied of the fact that he was willing to have the experiment tried on himself. He then requested me when I again prepared the gas to bring a bag of it to his office, for the purpose of having one of his teeth extracted. And accordingly on the same day, as I now think, I took a bag of the gas to Dr. Wells's office, and he (Dr. Wells) went out and called in Dr. John M. Riggs, a dentist near by. Dr. Wells sat down in a large arm chair, took the bag into his hands, and breathed the gas till he became insensible, when Dr. Riggs extracted the tooth, which was a large double tooth. Dr. Wells remained insensible a short time after the tooth was extracted, but on recovery he cried out, "It did not hurt me more than the prick of a pin—it is the greatest discovery ever made," and continued for some time similar exclamations, but what I cannot precisely recollect. He seemed to be in very high spirits, and perfectly delighted with his discovery. He shortly after came to me to learn how to prepare the gas, and I gave him full information on the subject. He wanted also that I should let him have necessary apparatus, saying that he wished to use this agent in his profession, but I could not furnish it for want of time, and advised him to go to Boston and obtain it. I soon after left Hartford, and did not hear anything more of the subject, till I saw, a few weeks subsequent, a paragraph going the rounds of the newspapers announcing that Dr. Wells was extracting teeth without pain, and I stated on several occasions in connection with that paragraph, how and when the discovery originated.

"Further the deponent saith not.

"GARDNER Q. COLTON."

Sworn to this 4th December, 1852, before me,

A. C. KINGSLAND, *Mayor.*

On these proofs it will, it is believed, be proper to submit the following remarks:

1st. It appears from the testimony of Dr. Brockett that the attention of Dr. Wells was turned to the subject of anæsthesia, and that he entertained the idea of applying nitrous oxyde for that purpose as early as the summer of 1840. His language was appropriate: "I believe a man may be made so drunk by this gas, or some similar agent, that dental or other operations may be performed on him without any sensation of pain." It thus ap-

pears that he preceeded in speculation even Dr. Jackson, by more than one year. It is fortunate that the absence of Dr. Brockett from Hartford, from September, 1840, to December, 1846, enables him to fix the date with certainty.

2d. The statements of Dr. B. account for the rapidity displayed by Dr. Wells in his inductions from the occurrences of Colton's lecture. The moment he perceived that the young man had, in fact, injured himself, and was not conscious of pain, the old idea which he had suggested to Dr. B. flashed on his mind. He instantly announced it to Mr. David Clarke, then present; "I believe," said he, "a man, by taking that gas, could have a tooth extracted or a limb amputated and not feel the pain." He repeated the same idea to Mrs. Wells on returning from the lecture, in response to her reproaches for taking the gas and making himself rediculous before a public assembly. After seeing his wife home he immediately went over to the office of his friend, Dr. Riggs, and there propounded to him the same idea; when, after a long discussion, he determined that he would cause the soundness of his views to be tested the succeeding day by an experiment on himself. Accordingly, the next morning he goes to Professor Colton and after some enquiries reiterates the same opinion, and again avows a determination to bring the matter at once to an issue, and made the requisite arrangements to that end.

3d. There never was a case of the conception and originality of an important idea more fully proved than in the present. No less than four witnesses swear to it as an emination of the mind of Dr. Wells, and of his alone, without taking into account the suggestion to Dr. Brockett at a much earlier date.

4th. We have witnesses not only to prove its conception, but also its partumtion, or, in other words, its verification by experiment. The statements of Mr. G. Q. Colton and Dr. John M. Riggs, (to say nothing of the testimony of Mrs. Wells,) are so full and precise as to exclude the possibility of cavil or doubt. Dr. Wells was brought fully under the influence of the gas; the insensibility was complete, and continued until after the operation was finished; the agent was found adequate to the end proposed and the experiment was successful in a high degree; in short, all of Dr. Wells' anticipations were realised, and well might he exclaim on returning to conciousness, "a new era in tooth-pulling; it did not hurt me more than the prick of a pin; it is the greatest discovery ever made."

5th. The proofs in favor of the success of Dr. Wells' first anæsthetic experiment is much more full and cogent than that of Dr. Morton's in the case of Eben Frost. No less than three witnesses swear to the former and only one (Dr. Hayden) was present to speak of the latter. The purpose of Dr. Wells to take the gas and have a tooth extracted, as avowed on the evening of 10th and on the morning of the 11th of December, is proved by four witnesses; and two (Riggs and Colton) describe the administration of the gas on the 11th, and its effects, with much greater

amplitude of detail than Dr. Hayden does the application of the ether to Mr. Frost, and yet there are those who reject the statements of the former as fabulous, while they yield to those of Morton and his single witness an unhesitating confidence. It is believed we have more of the partizan displayed in such conduct than the sincere inquirer after truth.

II. Dr. Wells, after realizing the truth of his theory, enters immediately on further experiments with the most satisfactory results, and soon introduces the new system into general dental practice at Hartford.

It will be recollected Mr. Colton says that Dr. Wells, immediately after the extraction of his tooth in the manner already stated, came for him for instruction as to the preparation of the gas, and also to the necessary apparatus, saying he intended to introduce this agent into his practice, or words to that effect. Mr. Colton gave him the requisite instructions, but advised him to go to Boston and obtain the apparatus. This testimony shows the high confidence which Dr. Wells had in the new agent; but there is much other evidence to the same effect before the committee.

Further Extracts from the Deposition of Dr. Riggs.

After describing the experiment on Dr. Wells and its success, as hereinbefore recited, Dr. Riggs proceeds thus: "We were so elated by the success of this experiment that we immediately turned our attention to the extraction of teeth by means of this agent, and continued to devote ourselves to this subject for several weeks, almost exclusively. * * * * * * Dr. Wells continued to use the gas freely in the practice of dentistry during the remainder of that year and the year following, and at all times when he was in the practice of his profession. I, myself, also used it as people demanded it, which they ordinarily did.

"It was the subject of profound interest in Hartford, and attracted unusual public attention through the years 1845 and 1846. It was notorious here in the winter of 1844–5, and afterwards, that Dr. Wells had made the important discovery that the system could be rendered insensible to pain during dental operations. Dr. Wells was enthusiastic and sanguine in the pursuit of objects towards which he turned his attention, and was one of the most inoffensive men I have ever known.

"He pursued his business with great ardor when able to do so, but was obliged occasionally to abandon it, owing to failure of health, but at no time did he abandon his claim to this discovery, or the use of it. During the intervals of interruption he referred his patients to me, and would bring them to my office and ask that gas might be given."

"Several weeks elapsed after making the discovery before Dr. Wells went to Boston, and during that time operations were many times performed upon the teeth by him and myself with this agent with the most salutary results, for we never had a failure, and the success was better than I have since had with ether or chloroform. I consider it a better agent on the whole than either of the others."

"It was I think in the month of January next following the discovery, when Dr. Wells declared to me that it was his intention to introduce this agent to the notice of the medical faculty in Boston and New York, with a view to its introduction into general surgical practice, and in a few days he started for Boston. On his return he said he had tried the experiment in a single case, which had partially failed in consequence of his assistants withdrawing the bag too quickly. The students before whom the operation was performed hissed him, and the whole thing was received with ridicule. He seemed to be greatly wounded in his feelings; being extremely sensative he was rendered almost sick by it, and was greatly depressed. I know that Dr. Wells at all times claimed the discovery up to the time of his death, and was also much engaged from and after the time that Dr. Morton's pretentions became known to him, in writing and publishing in defence of his right and in experimenting with gas and ether and finally with chloroform on himself and others, with a view to see which was the best. And I further say that noting whatever was known of the anæsthetic effect of this or any other agent previous to Dr. Well's discovery. Nor did I hear of any claim of Dr. Morton as being the discoverer of such an agent until about two years after the discovery of Dr. Wells. And I verily believe Dr. Wells is the true and only discoverer of an anæsthetic agent, and the first to introduce it into practice."

"I knew Dr. Morton when settled in the town of Farmington, Connecticut, in the practice of dentistry; he had little knowledge of his profession, was illiterate, and generally an ignorant man. He was a pupil of Dr. Wells in the years 1841 and 1842, and was in the habit of coming to Hartford to recite to Dr. Wells and to obtain his assistance in getting up work."

"Some time before Dr. Wells made his discovery, he (Dr. Wells) entered into co-partnership with Dr. Morton to open an office in Boston, and went there for that purpose and staid several weeks. On his return he told me he should dissolve the partnership, as he found that Dr. Morton was not qualified for the profession, and it was dissolved accordingly."

"One of the principal points of difficulty Dr. Wells and I discussed respecting the use of the protoxyde of nytrogen or nitrous oxyd gas, was, we feared, the patients would be unmanageable. Our experiments set this at rest, which I consider a most important fact. I find on reference to my books that this agent was used by me in extracting teeth up to November 2d, 1846, which is my last change. Since that time I have used chloroform generally when my patients requested anything."

"I have used ether a few times, but with such unsatisfactory results as to abandon it as being inferior to the gas, and I thought more unsafe. Some could not be brought under the influence of sulphuric ether enough to destroy sensation."

"Patients who paid when an operation was performed, were not entered on my books, nor those to whom the gas was given gratuitously. A very large proportion of those who have teeth extracted pay for them at once. I was in the habit for the greater ease of furnishing gas, to appoint some afternoon in the week, and then take out teeth for as many as had made appointments. I find from minutes that on July 26th, 1845, seven were extracted while the names of only two of the individuals were recorded."

"I further say that Dr. Wells informed me at a date prior to Morton's patent, that W. T. G. Morton called on him several times to learn how nitrous oxyd gas was prepared, and said that he had referred him first to me, and afterwards to Professor Charles T. Jackson, of Boston, who he said would prepare it for him or tell him how it should be done, as he knew all about it. Shortly after this, I heard of Morton's letheon."

Further Extracts from the Deposition of Mrs. Elizabeth Wells.

"From that time," (meaning from the first trial of this agent,) "he began to use gas in extracting teeth, and continued to do so from time to time down to the day of his death. He seemed to take a profound interest in the subject. He was incessantly engaged in extracting teeth with this agency, and in trying experiments on himself and others for many months after his discovery. He would lie awake nights, and often abruptly leave his meals to hasten to his office. At length excitement and other causes in this connection underminded his health, and he was obliged to give over his profession for a time. He then resumed it, and continued to use the gas as before." * * * * "There were several interruptions in my husband's practice, but whenever he entered upon it he would use the gas as opportunity offered. In the intervals, and indeed at all times after the discovery, this agency was used by Dr. Riggs and others in Hartford."

"In the month of January succeeding this discovery, my husband went to Boston, for the purpose of making known his discovery to the public there, and was absent about a fortnight. He said on his return that he had been but partially successful; that his discovery was treated as a humbug, and the people there would lend him no assistance."

"In the winters of 1844 and 1845, and repeatedly thereafter, I made bags of India (rubber) cloth for my husband, to be used in administering this gas in dental surgery, and frequently saw them in the hands of my husband when engaged in his profession."

"Dr. Morton established himself in Farmington, Connecticut, in the practice of dentistry, some time before my husband made

the discovery mentioned above, and was for several weeks in the habit of coming into Hartford to recite to my husband in the evening."

"My husband died in New York, January 24th, 1845. He became insane, and I verely believe by reason of the opposition of Morton to his discovery. I also believe that his health was greatly impaired with the experiments which he made on himself with the gas, ether, and chloroform."

"And I further say that I never knew or heard that the human system could be made insensible to pain until the discovery was made by my husband, in the winter of 1844, as above stated; and I verily believe that my said husband was the first and only discoverer of the fact aforesaid. My husband always claimed this discovery up to the time of his death, and was almost constantly engaged after the pretensions of Morton became known in writing and publishing in vindication of his right."

"I further say that my husband started for France the latter part of December, 1846. One object of his visit was to publish his discovery. When he found that Jackson and Morton were already making efforts each to secure the honor for himself, he immediately strove to make known his own just rights, and published in one of the papers a letter of P. W. Ellsworth, which he had taken with him for this purpose. From letters of my husband, French newspapers, English Medical journals, letters of C. S. Brewster, and H. J. Bennett, editor of the London Lancet, I was informed of my husband's flattering reception, and the happy termination of a long discussion before the Academy of Medicine in his favor, the strenuous exertions of Drs. Jackson and Morton to the contrary notwithstanding. A letter from C. S. Brewster, dentist, in Paris, was received by my husband, announcing that the society had conferred on him the degree of M. D., and that the diploma would be forwarded by the next steamer. The occurrence of the revolution of 1848, which broke out at this critical moment, caused either that it should be forgotten or lost."

Extracts from the Deposition of E. E. Marcy, M. D., of the city of New York.

"That about the year 1838 I settled as a physician and surgeon in the city of Hartford, Connecticut, and continued to reside there and practice my profession up to 1850, when I removed to this city, and have since been engaged in practice here. I was intimately acquainted with Dr. Horace Wells, surgeon-dentist, late of said Hartford, deceased. He was a man of strict rectitude, and in every way worthy of entire confidence. He possessed a peculiarly active, investigating, and philosophical mind, and was, therefore, almost constantly engaged in researches and inquiries, such as would naturally attract the attention of a man of his taste."

"I further say that some time in the fall of 1844, Dr. Wells came to my office and informed me that by administering the nitrous oxyd gas he could extract teeth without pain. I had previously become well acquainted with the effects of the gas, and also of sulphuric ether on the human system. When a student at Amherst College, Massachusetts, I had often seen both substances administered, and had inhaled both myself, and knew that the operation and effect of these substances, when inhaled, were nearly similar; but I did not know, when Dr. Wells called on me, that either the one or the other would produce insensibility to pain, under dental and surgical operations. I therefore expressed some doubt to Dr. Wells when he announced the above fact. In reply he said, I am about to extract a tooth under its influence, and if you will go to my office I will demonstrate to you the truth of my statement. Accordingly, on the same day I went to his office, and witnessed the extraction of a tooth from the person of F. C. Goodrich, Esq., of said Hartford, by Dr. Wells, after nitrous oxyd gas had been inhaled, and without the slightest conciousness of pain on the part of the gentlemen to be operated upon. Not only was the extraction accomplished without pain, but the inhalation of the gas was effected without any of those indications of excitement, or attempts at muscular exertion, which so commonly obtain, when the gas is administered without a definite object, or previous mental preparation. In a former deposition I stated that this operation took place in the month of October, 1844, but I may be mistaken as to the month. That it was in the fall of 1844 I am positive; and within two or three days after, I had understood, Dr. Wells had made the discovery." * * * * * * *

"Immediately after the discovery, the fact became generally known in Hartford, and was the subject of much conversation. Dr. Wells was exceedingly enthusiastic upon the subject; was incessantly conversing about it, and prosecuting his experiments. Numerous trials were made by Doctors Ellsworth, Berresford, Riggs, Terry, and myself, both in large and small operations, which fully established the efficacy of the gas." * * * "And I further say that I am clearly of the opinion that to Dr. Wells alone belongs the credit of this great discovery."

Extracts from the Deposition of P. W. Ellsworth, M. D., Hartford, Connecticut.

"Towards the close of 1844, I was informed that said Wells had discovered an agent by means of which the body could be rendered insensible to pain under dental operations. This I learned from Dr. Wells, from persons who had been operated upon, and from most of the dentists of the city. It was then notorious here that such a discovery had been made. Very shortly before or after the visit of Dr. Wells to Boston, with a view to

bring out his discovery, to wit, in January 1845, I witnessed a successful dental operation, being the extraction of a tooth without pain, by administering nitrous oxyd gas. The subject was a young man, but I do not recollect his name; nor do I recollect whether Dr. Wells or Dr. Riggs performed the experiment, as they had offices in the same building, and were co-operating in those experiments. I think they were both present. It was then admitted to be the discovery of Dr. Wells, and no one, until long after, pretended to controvert this fact. And I further say, I was in the habit of constant intercourse with Dr. Wells, from the period of this discovery up to his death, and we became more and more intimate until that event occurred."

"Dr. Wells was an accomplished dentist, and very successful in his profession. He possessed an active and enquiring mind; was inventive and versatile, his mind passing with great rapidity from subject to subject; and this gave to his course the appearance of fickleness, at least to some extent."

"When it was announced to me that teeth could be extracted without pain, my attention was attracted to the subject, and very strongly so after the effect had been established by numerous experiments. This was early in 1845. I had then an idea of trying this agency in more important operations, but I was young in the profession, and it was necessary for me to proceed with caution. Some time in the year 1845 or 6, according to my best recollections, and before Dr. Morton's pretentions to this discovery were advanced, though I will not be positive as I may be mistaken, I extracted a tooth for Mrs. Webb, then of Middletown, in this State, but now the wife of Professor Benjamin Silliman, Sr., of New Haven, administering the nitrous oxyd gas, which was prepared at my request by Mr. Samuel A. Cooly. The operation was unattended with pain, and was entirely successful." * * *

"And I further say that some time in the year 1845 or 1846 I went into the office of either Dr. Wells or Dr. Riggs, (they were side by side in the same building,) and asked whether they continued to use the gas, and had a reply in the affirmative. I know that Dr. Wells, from the time of his discovery up to the time of his death, was making improvements both in the preparation and mode of administering the gas, and ultimately it became in his hands more efficient than it was in the first instance. The gas was much more pure and the instruments were better."

"It was long known, previous to the discovery of Dr. Wells, that sulphuric ether produced effects on the human system similar to those of the nitrous oxide gas, and it being known that the latter would produce insensibility to pain under dental and surgical operations, it must at once occur to any surgeon or scientific person that the former would probably produce the same results and equally available, though more difficult to prepare. Ether is slow in producing an effect and disagreeable, while nitrous oxide gas is in both particulars the reverse. I think in comparing the cases where the gas has been used and pure sulphuric ether

alone the gas proved superior. The effect of the gas after the insensibility has passed away is pleasanter than ether. The latter during its administration not unfrequently causes vomiting and nausea. But ether is more easily obtained and more portable, and is therefore now more commonly used. The same thing may be said of chloroform. Latterly, chloroform and chloric ether have to a great extent supplanted sulphuric ether, as the former is more efficacious and both pleasanter. I myself prefer a combination of ether and chloroform in proportion of three of the former to one of the latter, which is in my judgment more active than ether, and safer than chloroform. But nothing prevents my using the gas now except the mere circumstance of convenience."

"I further say that I had many conversations with Dr. Wells on the subject of his discovery in 1845 and 1846, and indeed up to the time of his death, and he was at all times enthusiastic in regard to it, and I did not know or suspect that any one controverted the right of Dr. Wells until Dr. Morton advanced his claim in 1846." * * * "And I further say that Dr. Wells at all times claimed the discovery as his own and was exceedingly indignant at the pretentions of Dr. Morton. After these became known, he was very much occupied in writing and publishing in defence of his discovery. I know he never abandoned his right though he occasionally left his profession by reason of his health." * * * * "And I further say that Dr. Wells was in my opinion the true and only discoverer of the fact that the human system can be rendered insensible to pain during dental and surgical operations by same agent, and in my judgment the finding out of the fact constitutes the discovery which is such a boon to humanity; for it being known that nitrous oxyd gas would produce this result, the substitution of other agents has little merit, particularly as such substitution would naturally suggest itself to any scientific mind. Very soon after Dr. Wells made the above discovery, the fact became generally known in this community and was the subject of much conversation, and Dr. Wells was universally reported to be its originator or author, and he has ever since been and is now believed here to be entitled to the credit thereof."

Extract from the Deposition of John B. Terry, Dentist, of Hartford, Connecticut.

"That I was well acquainted with the late Dr. Horace Wells from about the year 1840. In the year 1844 I was residing in this city, in practice of my profession as a Dentist. Immediately after the reputed discovery of Dr. Wells, in 1844, I was informed respecting it by himself, and witnessed many experiments by him, and saw the apparatus by which he administered the nitrous oxyd gas, for the purpose of rendering his patients insensible to

pain in the extraction of teeth. I knew of his discovery prior to his going to Boston to make it known to the medical men there; on his return from Boston Dr. Wells told me he was disappointed in its operation; there was, he said, too great hurry, or some defect in preparing the gas; that the ammonia, perhaps, was not good; but he still expressed a determination to convince the world that it was a valuable discovery, and a full belief that any surgical operation could be performed without pain under the influence of nitrous oxyd gas. Dr. Wells was obliged to suspend his business at intervals, much to his regret, as he said if he could have continued it, he could have made a great deal of money in extracting teeth under the influence of the gas. During the time he was engaged in his profession he continued to make improvements in the construction of his inhaling aparatus, in the nitrate of ammonia, of which the gas was made, in the gas itself, and its mode of preparation from the time of his discovery to his death. These improvements I continued to use afterwards; I had an office adjoining the one usually occupied by the late Dr. Wells, and we were associated together on the 19th day of December, 1846, in the practice of dentistry; for nearly a year before this we were associated without terms of partnership, and while he was absent I attended to his business, in part, and made him an allowance; my impression is that Dr. Wells used the gas while attending to business, and when he was absent I administered the gas for him. I am certain that prior to October, 1846, I was in the frequent habit of administering the gas, and considered it then, as I do now, as more useful than any anæsthetic agent for the purposes of dentistry. Dr. Wells' confidence in the gas was constantly increasing from the first; no one, to my knowledge, doubted that Wells was the discoverer of the anæsthetic properties of the gas, nor did I hear, at that time, that any one claimed to be the discoverer but him. I think I have administered more of this gas for dental purposes than any other person, and I am well acquainted with all its effects. Before Dr. Wells left for Europe, he spoke about making known his discovery there, and at my recommendation took out an apparatus for administering the gas. He had made great improvement in preparing the gas, so that the apparatus was easier to carry about, as well as use. One of his objects in going to Europe was to publish his discovery there; when Dr. Wells was in Europe I received letters from him saying he was meeting with great success; our partnership was then existing, and was not dissolved till after his return; he said Dr. Brewster, Dentist, of Paris, invited him to become partner with him. I have often heard Dr. Wells speak of W. T. G. Morton as a former student of his, (Dr. Wells;) and some of these conversations were prior to the date of Morton's claim, in October, 1846; and I remember that Dr. Wells went on to Boston for the purpose, as I understood him, of forming a partnership with W. T. G. Morton, and of starting Morton in business. Morton, while in Farmington, Connecticut, was considered by Dr. Wells as a

bad workman, and I have heard Dr. Wells speaking of doing over some of Morton's work for him."

Extract from the Deposition of John Braddock, of Hartford, Connecticut.

"During the year 1845 I was in the practice of dentistry in this city for the period of about six months. I came to Hartford in the month of January, 1845, from the city of Philadelphia, where I had been in business about one year. Immediately on my return from Philadelphia, I learned, from Dr. Wells, himself, that he had discovered that, by the use of the nitrous oxyd gas, teeth could be extracted without pain. I had frequent conversations with Dr. Wells on the subject, and he wanted me to go to New York with him for the purpose of introducing it into general use in dental and surgical operations, and practice; but, as I had made all my arrangements to go into the practice of dentistry in this city, I declined his proposition.

"The discovery of Dr. Wells was notorious in Hartford at that time; it was a common topic of conversation, and I have no hesitation in saying that, in my opinion, Dr. Wells was the first to discover and use an agent by means of which dental and surgical operations could be performed without pain.

"In the spring of 1845, I saw several teeth extracted for different persons under the influence of this agent, by Dr. John Riggs, with the most satisfactory results. The patients seemed to experience no pain whatever, and after the operations were performed and the effects of the gas had passed away, they so expressed themselves."

Deposition of E. E. Crofoot, of Hartford, Connecticut.

"I, E. E. Crofoot, dentist, of the city and county of Hartford, and State of Connecticut, do depose and say I am forty years of age, and have been settled in the city of Hartford ten years, in the practice of my profession. I knew the late Dr. Wells intimately; he had the reputation of having discovered a mode of extracting teeth without pain; I never saw any of his operations, but have seen those on whom he had performed. I have had some personal experience in the use of anæthetic agents, having extracted two teeth for a Miss Angelina Griswold, of West Hartford, while under the influence of nitrous oxyd gas. Both teeth were removed at one sitting, and in a satisfactory manner. This was in the year 1845 or 1846, previous to a severe sickness which I had, commencing in September, 1846, which continued many weeks. No one claimed, to my knowledge, to have suggested the discovery to Dr. Wells, and no one controvered his claim up to October, 1846. E. E. CROFOOT."

Sworn before

HENRY L. RIDER, *Notary Public.*

Deposition of David S. Dodge, M. D., of the city of New York.

"I, David S. Dodge, physician, of the city, county, and State of New York, being duly cautioned and sworn, do depose and say, that I was for many years a practicing physician and surgeon in the city of Hartford, in the State of Connecticut, and was well acquainted with the late Horace Wells, dentist, and had knowledge of the fact that Mr. Wells discovered the anæsthetic properties of nitrous oxyd gas and sulphuric ether as early as the year 1844; that he was frequently in the habit of using the former agent in producing insensibility while pursuing his usual avocation; that so far as I am informed this peculiar property of nitrous oxyd gas was unknown to the medical profession up to that year; that said Wells was very enthusiastic in pursuing his investigations and in making various experiments; that his health suffered in consequence, and he was obliged to suspend his interesting investigations and take a voyage to Europe; that in conversation he mentioned certain disappointments he experienced during a visit to Boston, about the winter of 1844–5, when he was invited to administer the gas to a patient previous to an operation to be performed in the presence of the class of Dr. Warren's medical students; that the gentlemen of the faculty had no confidence in the proposed use of the gas, and that while he (said Wells) was endeavoring to administer the gas to a patient as above, he was greatly annoyed by offensive remarks and the occasioned sneers of the audience. I believe that Horace Wells was the original discoverer of anæsthetic properties of nitrous oxyd gas and sulphuric ether, and is fully entitled to have his name recorded among the useful and benevolent of his age.

"DAVID S. DODGE."

Sworn before

C. G. E., *N. P.*

Deposition of Thomas Steel, of Hartford, Connecticut.

"I, Thomas Steel, of the city and county of Hartford, and State of Connecticut, of lawful age, do depose and say, that I knew the late Dr. Horace Wells intimately, and often conversed with him on the subject of his discovery of an anæsthetic agent for the purpose of dental operations; I heard him say he had been to Boston for the purpose of making known his discovery; soon after I first heard of its successful application; I believe this was early in the year 1845; he spoke of having made an exhibition at that place; some in Boston spoke in his favor, but more against him; he appeared to be sanguine of its ultimate success; he always spoke of it as his own discovery, and never heard of any one alluded to as having suggested the idea to him. I heard of the gas being

used by Dr. Wells before and after his return from Boston, when he went to lay his discovery before the Medical Faculty."

"THOMAS STEEL."

Dated the 14th day of December, A. D. 1852.

Sworn before

HENRY L. RIDER, *Notary Public.*

Extract from the Deposition of Hon. James Dixon, member of the House of Representatives in the 29th and 30th Congresses from the first Congressional District, Connecticut.

"That I was informed in the month of May, 1845, by Dr. John M. Riggs and by Dr. Horace Wells that he [the said Wells] had discovered that a state of insensibility to pain could be produced by inhaling nitrous oxyd gas, so that surgical operations could be performed without pain by its use. He stated, according to my best belief, that he had extracted thirteen teeth in one day, without pain, and with entire safety, under the influence of the gas. The discovery was recent as he stated. He also said that he had visited Boston, and had attempted to perform an operation with the use of the gas in presence of a surgical class. I think he said Doctors Jackson and Morton were present and witnessed his attempt, which was not wholly successful, in consequence of the imperfect inhalation of the gas. Doctors Jackson and Morton, with the other gentlemen present, ridiculed his pretensions, and discouraged further attempts. I am not quite certain he said Dr. Morton was present, but this is my belief. Dr. Wells afterwards continued to use the gas in surgical operations. He often told me that Dr. Morton obtained all he (Dr. M.) knew from him, Dr. Wells, and complained of ill-treatment on the part of Morton, in attempting to rob him (Wells) of the merit of the discovery." * * * * "I would add that the discovery of Dr. Wells was notorious in Hartford in the spring of 1845, and was then, and for some time had been and continued to be a frequent topic of conversation. It excited great attention, and was deemed of much importance."

Extracts from the Deposition of Edward W. Parsons, of Hartford, Connecticut.

"I was intimately acquainted with the late Doctor Horace Wells, of said Hartford, and was the administrator on his estate." * * * * "I recollect the circumstance of Dr. Wells going on to Boston to place his discovery before the medical faculty. I know that Dr. Wells always asserted that the discovery of an anæsthetic agent was his, and I know that he always claimed that he was the first to discover the use and availability of anæsthetic agents."

"Dr. Wells was occasionally obliged to discontinue the practice of dentistry, on account of ill health. He frequently told me that the labor of filling teeth brought on a pain in the chest, and inhaling the breath of so many patients induced sickness. He occasionally turned his attention to other and more healthy pursuits for a short time, for the purpose of regaining his health."

Deposition of William W. Goodwin, of Boston, Massachusetts.

"I, William W. Goodwin, of Boston, Massachusetts, having been duly cautioned and sworn, depose and say, that I am thirty-five years of age. Have been a druggist and apothecary for the last nineteen years. I am a native of Hartford, Connecticut, where I resided and pursued my business until February, 1845, with the exception of the years 1837 and 1838. About the middle of February, 1845, I came to this city, where I have since resided. Several weeks before leaving Hartford it was very generally reported that the late Dr. Horace Wells, of that city, was extracting teeth without pain, by an agent called by him the nitrous oxyd gas. Shortly before leaving Hartford, I called at the office of Dr. Wells, and he showed me the nitrate of ammonia, from which he prepared the gas; also some bags and apparatus used by him in administering the gas. Dr. Wells was the first person I ever heard of using any anæsthetic agent in dental or surgical operations; and I never heard of the anæsthetic properties of any agent prior to the experiments of Dr. Wells, above mentioned; and I further say, that I never heard that any other person than Dr. Wells claimed to have discovered an anæsthetic agent, till several months after I came to Boston.

"WM. W. GOODWIN."

BOSTON, *December* 11, 1852.

Sworn before

CHARLES MAYO, J. P.

Deposition of James M. Greenleaf, of Hartford, Connecticut.

"I, James M. Greenleaf, dentist, of Hartford, county of Hartford, depose that I am thirty-three years of age, and have been in the practice of my profession in Hartford about ten years.

"I knew the late Dr. Horace Wells very well, and remember that nitrous oxyd gas was given at public lectures about the close of 1844. I knew also that Dr. Wells had the reputation of using this gas for the purpose of preventing pain in the extraction of teeth. I never saw any operation by it, though I have seen it administered for other purposes. I have a brother a dentist, who formerly resided in Essex, Connecticut, who informed me he used

it, I am confident, in the years 1845 and 1846. I have seen the apparatus by means of which he prepared and administered it. I have occasionally used chloroform and chloric ether in my practice, but never sulphuric ether, or nitrous oxyd gas.

"J. M. GREENLEAF."

HARTFORD, *December* 16, 1852.

Sworn before

HENRY L. RIDER, *Notary Public.*

BUT WE WILL NOW TURN OUR ATTENTION TO SPECIFIC CASES OF THE APPLICATION OF THE GAS IN DENTAL SURGERY WHERE THE PARTY OPERATED ON APPEARS AND BEARS TESTIMONY TO THE EFFICACY OF THE NEW AGENT. THEY WILL BE MOSTLY CASES THAT OCCURRED LONG BEFORE THE PRETENDED DISCOVERY OF DR. MORTON, AND WILL ABUNDANTLY SUSTAIN THE CLAIMS OF DR. WELLS TO ORIGINALITY AND PRIORITY IN THE MATTER OF ANÆSTHETIC AGENTS.

Extracts from the deposition of Francis C. Goodrich, of Hartford, Connecticut.

"I am now thirty-two years of age, and a printer; have been engaged in the pursuit of my business for the last ten years, with the exception of some two years, or more, and was acquainted with the late Horace Wells, of the city and county of Hartford, State of Connecticut."

"In the latter part of the year 1844 I learned that Mr. Wells had made a very important discovery, by which he could render the nervous system insensible to pain under severe surgical operations. This was accomplished by the use of nitrous oxyd gas. In the month of November or December, I think in November, of the year above mentioned, and after the experiment had been tested in a measure, I submitted to the operation of having a tooth extracted by Dr. Wells while under the influence of nitrous oxyd gas, which was performed in the presence of Drs. Marcy, Kitteridge, and Riggs, and was unattended with even the slightest sensation of pain to the nervous system."

"The gas was administered to me by Dr. Wells, who was assisted by Dr. Riggs, and in a few seconds after I commenced inhaling it I fell into a stupor and partially unconscious state, experiencing at first a sense of numbness in my limbs, followed by an indescribably rapturous or pleasurable sensation of the brain, and increasing in intensity until I seemed, as it were, a mere spark or atom of matter floating away in the regions of space."

"I was not, however, wholly unconscious during the entire operation; I knew when the instrument was applied to the tooth, and heard remarks by those present, but I neither felt nor feared

pain, nor do I believe it possible to have inflicted pain upon me in any manner during the time my nervous system remained entirely under the influence of the exhilarating gas." * *

"Soon after the operation to which I submitted, as mentioned above, I witnessed a similar experiment upon two persons, viz., J. Gaylord Wells and William H. Burleigh, Esq., both having one or more teeth extracted by Dr. Wells, apparently, and as they testified, without pain."

"I was also familiar with the fact that, succeeding these experiments, Drs. Riggs and Terry commenced and continued the use of the gas more or less frequently in their extensive practice of dental surgery, and I regard it as a fact, with which the people of Hartford were then more or less familiar, that nitrous oxyd, when inhaled in the respiratory organs, would have the effect upon the nervous system to produce insensibility to pain; that it had been, and then was successfully used in severe dental and surgical operations. I had supposed this fact so well established that no one could doubt it, or call it in question, and I am quite certain that, at a period commencing as early as December, 1844, it was a matter with which many of the citizens of Hartford were personally familiar."

Extracts from the deposition af John Gaylord Wells, of Hartford, Connecticut.

"That I was intimately acquainted with the late Dr. Horace Wells, of this city. That about the close of 1844 I heard that Dr. Horace Wells, dentist, had had a tooth extracted under the influence of nitrous oxyd gas without pain. I had two teeth extracted before this period alluded to, which caused excessive pain. After the removal of one I fainted, and was insensible for a number of minutes. Having heard of the discovery, I availed myself of the opportunity, and Dr. Wells extracted a tooth for me immediately after the extraction of his own. It was certainly in the month of December, 1844. The gas was given from a large bag. On this occasion I had one tooth removed, and a number after at different times, and all without pain."

Mr. Wells then goes on to give the particulars as to the other teeth, but as this part of his deposition will hereafter be quoted for another purpose, it is omitted for the present. He then proceeds as follows:

"I heard of others having teeth drawn under the influence of the gas, and induced some to go. The subject at that time was a topic of common conversation among my friends for several years after my first tooth was extracted under the influence of the gas, and often heard Dr. Wells converse on this subject, and he continued to consider it a very valuable discovery. I have often heard him claim he was the discoverer both before and after October, A. D.

1846, and I never heard him state that any one suggested the idea to him, but the reverse. I have no hesitation in stating fully that I consider Dr. Wells as the discover of anæsthetic agents in surgical and dental operations. I had frequent business transactions with Dr. Wells for years. In every respect his character for veracity and honor was irreproachable."

Deposition of William H. Burleigh, of Hartford, Connecticut.

"A little more than two years since I learned that Dr. Wells, dentist of this city, had made the discovery that by the use of an exhiliarating gas or vapor he could render the nervous system insensible to pain under severe surgical operations, and that he was using it in his practice with great success. Having an opportunity to witness its effect on several persons during the operation of extracting teeth, I was so delighted and surprised with its manifest success, that I desired a trial of it upon myself. The gas was accordingly administered, and two carous teeth were extracted from my lower jaw without the least suffering on my part, though ordinarily, owing to the firmness with with which my teeth were fixed in my jaw, I suffer extreme pain from their extraction.

"W. H. BURLEIGH,
"*Editor of the Charter Oak.*"

HARTFORD, *March* 25, 1847.

Sworn before

A. M. COLLINS, *Mayor.*

Deposition of Mylo Lee, of Hartford, Connecticut.

"I, the undersigned, resident of Hartford, Connecticut, do hereby testify that more than two years since I submitted to the operation of having a tooth extracted while under the influence of nitrous oxyd gas. According to the best of my recollection this was in the month of November, 1844. The gas was given and the tooth extracted by Horace Wells, dentist of Hartford, and I do further testify that the operation was attended with no pain whatever.

"MYLO LEE."

MARCH 26, 1847.

Sworn before

A. M. COLLINS, *Mayor.*

Deposition of Norman W. Goodrich, of Hartford, Connecticut.

"I, Norman W. Goodrich, of the city and county of Hartford, and State of Connecticut, depose and say, that I am thirty-four years of age, and have resided in the city for the last fourteen years. During the years 1844, 1845, and 1846, I was engaged in the office of the "Charter Oak," then published in the city; I was intimately acquainted with the late Dr. Horace Wells, of Hartford. In the month of December, A. D. 1844, I heard that Dr. Wells had discovered a mode of preventing pain during dental operations. I first learned this fact from J. G. Wells, of this city, who informed me that he had a tooth extracted by Dr. Wells without any pain whatever. Soon after this I learned that Dr. Wells was constantly extracting teeth for persons without pain, by administering exhiliarating gas, as it was sometimes called. Sometime during the month of December, aforesaid, I accompanied J. G. Wells to the office of Dr. Wells, for the purpose of witnessing an experiment upon said J. G. Wells, while under the influence of the gas. On reaching the office of Dr. Wells, and making known our object, he informed us that Dr. Riggs, who occupied an adjoining office, was desirous of experimenting with the anæsthetic agent discovered by him, (Dr. Wells,) and he would therefore administer the gas, and allow Dr. Riggs to extract the tooth. Accordingly Dr. Riggs was called in, and extracted the tooth, after Dr. Wells had administered the gas. After Mr. J. G. Wells had inhaled the gas a few times he appeared to loose all consciousness, and manifested no signs of pain during the extraction of the tooth. On recovery from the effects of the gas he remarked that he felt no pain whatever.

"A few days after the above experiment, Mr. Williams, H. Burleigh, and myself, went to Dr. Wells's office to have teeth extracted. We were accompanied by T. C. Goodrich, Henry R. Tracy, and others, whose names I do not now recall. This was just before dusk. When we entered the office we found, among others, a boy who held a large tooth in his hand, which he showed us, saying that Dr. Wells had just extracted it for him under the influence of the gas. He said he felt no pain, and did not know when the tooth was pulled. Mr. Burleigh and myself told Dr. Wells we had come to take the gas and have teeth extracted. Dr. Wells replied that he had been giving the gas and pulling teeth all day, and was so tired and lame in consequence, that he was unable to do anything more that day, but if we wanted our teeth out then, he would administer the gas and let Dr. Riggs come in and draw the teeth. We agreed to that arrangement. Dr. Riggs came in; the gas was administered first to Mr. Burleigh, and his tooth extracted by Dr. Riggs. Mr. Burleigh seemed to experience no pain, and afterwards said he felt none whatever. After the operation on Mr. Burleigh, Dr. Wells looked at his apparatus, and remarked that there was not a full dose of gas left, but I could take what there was if I choose. I finally concluded

to do so, and the remainder of the gas was administered to me by Dr. Wells. Before the gas was administered Dr. Riggs looked into my mouth and said there was a "big fellow," just back of the tooth I wanted out, which was slightly decayed, and he wanted to try that one. I replied that I wanted the smaller tooth drawn, as it was very much decayed, but I finally consented that Dr. Riggs might try the larger one. He then examined Dr. Wells's instruments, but said none of them were large enough, and he would go to his office and get some, which he accordingly did. While under the influence of the gas I was unconscious of what was transpiring, except that during the operation I so far recovered from the influence of the gas as to feel a slight tingling just as the tooth broke. After the effects of the gas had entirely passed off, those standing around asked me if I felt any pain. I replied that I was barely conscious of a sensation—which could hardly be called painful—when the tooth broke, though I was conscious then that the influence of the gas was passing away. They then said that Dr. Riggs had twisted on the tooth hard enough to take my head off, and made several ineffectual attempts to draw the tooth before it finally broke. Dr. Riggs then informed me that the tooth had broken off close down to the jaw. I never felt happier than while under the influence of the gas, and I never felt any real pain or soreness either during or after the operation.

"A few months after this operation I accompanied Walter S. Williams and our wives to the office of Dr. J. B. Terry, dentist, of this city, for the purpose of witnessing further experiments with this agent. Mr. Williams took the gas for the purpose of having a large tusk, which was very prominent and inconvenient, extracted. After inhaling a sufficient quantity of gas, Dr. Terry applied his instruments and endeavored to draw the tooth; he pulled upon it several times, and finally laid down his instruments and said he was unable to extract it. During all this operation Mr. Williams seemed to suffer no pain, and on his recovery from the effects of the gas he said he had not felt the slightest sensation of pain.

"During the years 1845 and 1846 I was constantly hearing of successful experiments with this gas, by Dr. Wells and other dentists of this city, and during all that time, and indeed ever since, Dr. Wells was reputed in the community to have been the first to discover the anæsthetic properties of this agent, and the first to introduce it into practice.

"NORMAN W. GOODRICH."

Dated at Hartford, December 16, 1852.

Deposition of Horace E. Havens, of Hartford, Connecticut.

"I, Horace E. Havens, of the city and county of Hartford, and State of Connecticut, of lawful age, depose and say:

"That some time between the 1st of November, 1844, and the 1st of November, 1845, I called at the office of Dr. Horace Wells, corner of Asylum and Main streets, in this city, and requested Dr. Wells to administer the gas to me for the purpose of having a tooth extracted; the gas was given to me from a large black bag with a mouth piece; I had heard that it was very successful in allaying pain in the extraction of teeth; I breathed it a short time and Dr. Wells took out the tooth; Dr. Wells thought I should be easily affected, and gave me a smaller dose than usual, as he said; the consequence was that I was not fully affected, though the pain was very much mitigated; I felt the operation some, though it was very trifling; I had two teeth extracted after this by Dr. Riggs, (J. M. Riggs, of Hartford,) and then took nitrous oxyd gas, made by him in a large cask; the gas was taken from a bag, and during the operation I felt no pain whatever; this was while John G. Wells was with Mr. Burr in the Secretary's office, and was in 1845, previous to November first.

"Further deponent saith not.

"H. C. HAVENS."

Hartford, January 8, 1853.

Sworn before H. L. RIDER, *N. P.*

Deposition of Thomas Martin, of Hartford, Connecticut.

"I, Thomas Martin, of the city and county of Hartford, and State of Connecticut, merchant, of lawful age, depose and say:

"I have resided in said Hartford for the period of twenty years, last past. I was intimately acquainted with the late Dr. Horace Wells, of this city, and had frequent business transactions with him. I was informed by Dr. Wells, and others, of a discovery made by said Wells in the winter of 1844–5, for the prevention of pain in dental and surgical operations. Some time in the same winter Dr. Wells told me he was going to Boston for the purpose of bringing his discovery to the notice of the Medical Faculty, and the public there.

"A short time after his (Dr. Wells') return from Boston, I had some conversation with him respecting his visit to Boston; he replied that his announcement had not been received with the favor he anticipated, and which it deserved; but he expressed himself as able to convince any one who would examine the subject, of its truth. I frequently saw Dr. Wells during the years 1845 and 1846; and the subject of relieving pain by the use of gases or vapors was one which very much occupied his mind, and he told me he was experimenting upon their use, and making improvements in his apparatus at various times during this interval of 1845 and 1846. In the summer of 1845, I think before the middle of July, Dr. Wells extracted a tooth for me while I was under the influence of nitrous oxyd gas. I had before taken the gas for its exhilarating effects. The tooth—a large double

one—was extracted by Dr. Wells, himself, and I felt no pain during the operation, and was much pleased with its effects; I have also recommended it (the gas) to others. It was a notorious fact that Dr. Wells, and other dentists in this city, were, and had been, extracting teeth for a long time prior to October, 1846, under the influence and by the agency of some anæsthetic agent. I had conversations with Dr. Horace Wells just previous to his visit to France, in the winter of 1846; he told me his object was, in going to Paris, to announce his discovery to the medical faculty there; and that he intended to make some arrangement for the painting of pictures for sale here. I saw Dr. Wells after his return from France; he expressed himself as highly gratified at his reception by the medical gentlemen, and said he thought he had fully established his claim. I know that Dr. Wells was obliged to abandon his profession at intervals on account of his health; he told me that a sea voyage had been recommended for its improvement, and said he expected to receive some benefit from his voyage to Europe. Dr. Wells was very indignant at the attempts of individuals in Boston to rob him (Dr. Wells) of his discovery, and said they had formerly treated it with ridicule, but had received all their information on the subject from him.

"And further deponent saith not.

"THOMAS MARTIN."

Hartford, Connecticut, January 7th, 1853.

Sworn before H. L. RIDER, *N. P.*

Deposition of Franklin R. Slocum, of Hartford, Connecticut.

"I, Franklin R. Slocum, of the city and county of Hartford, and State of Connecticut, being of lawful age, depose and say:

"That I had some acquaintance with the late Dr. Horace Wells; that having great difficulty and suffering from the extraction of teeth, I called on Dr. Wells to take the gas, the use of which, in the extraction of teeth, he had discovered, as it was said to render the operation painless. I consulted with others, who knew about the effects of the gas, before submitting to the operation; the gas was given out of a bag; and on my recovery I found I had lost a large tooth. The operation was entirely painless. Dr. Wells was always considered, in this city, by my friends and acquaintances, as the discoverer of this agent for alleviating pain. This tooth was extracted soon after the public experiments by Colton and Cooly, in this city, with laughing gas, and was in the spring or fall of A. D. 1845. I have inhaled both nitrous oxyd gas and sulphuric ether, but prefer the former.

"And further the deponent saith not. F. R. SLOCUM."

Dated at Hartford, county of Hartford, State of Connecticut, this 13th day of December, A. D. 1852.

Sworn before H. L. RIDER, *N. P.*

Deposition of Lydia Goodwin, of Hartford, Connecticut.

"I, Lydia Goodwin, of the town and county of Hartford, and State of Connecticut, aged 71 years, depose and say:

"That in the spring of the year A. D. 1845 or 1846—according to the best of my recollection in the year A. D. 1845, I had two teeth extracted by Dr. Horace Wells, then a dentist in this city. The teeth were extracted three or four years before the death of Dr. Wells. The agent used in the extraction of my teeth was called by Dr. Wells gas; and the same he had used for some time previous. It was given from a large black bag.

"My lungs were very much diseased, and it was difficult for me to inhale the gas. I was not fully under its influence, yet the pain was very much mitigated. I had previous to this heard that Dr. Wells had extracted teeth without pain. Mrs. Peter D. Silliman was present at the operation, and accompanied me to Dr. Wells'. I experienced no bad effects from the gas, nor were my lungs injured by the inhalation. And further the deponent saith not.

"LYDIA GOODWIN."

Dated at Hartford, this 13th day of December, A. D. 1852.

Sworn before H. L. RIDER, *N. P.*

Deposition of Angeline Griswold Whiting, of West Hartford, Connecticut.

"I, Angeline Griswold Whiting, of West Hartford, Hartford county, and State of Connecticut, of lawful age, depose and say:

"That in the month of July, 1846, I was spending a few days at Dr. E. E. Crofoot's in the city of Hartford, and during that time I had two teeth extracted by Dr. Crofoot while I was under the influence of nitrous oxyd gas. I was not so completely under the influence of the gas as to loose entire consciousness of what was going on about me, but I felt no pain during or after the operation. I had long before known Dr. Horace Wells' discovery of an agent for destroying pain during dental and surgical operations, and had heard from persons who had been operated upon of the success attending the use of this agent by the different dentists in Hartford, but had never before had occasion to test the efficiency of this agent myself. And further deponent saith not.

"ANGEINE GRISWOLD WHITING."

Hartford, December 18, 1852.

Sworn before H. L. RIDER, *N. P.*

"Springfield, Hamden Co., Mass., *December* 13, 1852.

"This may certify that I, Edmund B. Richardford, was a resident of the city of Hartford, Connecticut, from the year 1839 to 1847.

Was well acquainted with the late Doctor Horace Wells, of said Hartford, and always believed him to be the discoverer of the application of nitrous oxyd gas for the alleviation of pain in surgical operations, in which at the time I was much interested. I never heard that any other person claimed the right of discovery until some time after successful operations were performed by said Wells and others under his direction. In the winter of 1845 or 46 I suffered severely with a large molar tooth which was partly decayed, and was extremely painful and sensitive to the touch. On the 13th day of March, 1846, that tooth was extracted without pain by Dr. J. M. Riggs, of Hartford, while I was under the influence of nitrous oxyd gas, administered by him, Mr. Wells at that time being absent from the city. On the 2d day of November, 1846, I had another tooth extracted without pain by the aforesaid Dr. Riggs, while under the influence of nitrous oxyd gas, administered by him. Since that time I have, on four or five different occasions, had teeth extracted while under the influence of ether and chloroform, sometimes without pain and in some instances suffering severely. I very much prefer the nitrous oxyd gas for such purposes, and should always use it were it at hand, or to be procured with proper appliances.

"EDMUND B. RICHARDSON."

Sworn before H. L. RIDER, *N. P.*

Extract from the Deposition of Walter S. Williams, of Hartford, Connecticut.

"I accordingly took the chair, and Dr. Terry administered to me what I supposed to be the newly invented gas by Dr. Wells. This was administered to me from a mouthpiece attached to a pipe, leading to a bottle or bag. I inhaled the gas, and very soon became insensible. Dr. Terry then applied his instruments, but did not succeed in extracting it. When I came to myself, which seemed like waking out of sleep, I saw Dr. Terry standing by my side seemingly exhausted; he said, 'I tried with all my might but could not fetch it.' I experienced no pain whatever during the operation."

"I know that Mr. Wm. H. Burleigh had teeth extracted some time previous to this. My impression is it was about a year previous; it might have been the winter before. It is my impression the same agent was used in Burleigh's and my own case that was used by Colton and Cooley, commonly called laughing gas."

IV. The evidence adduced hitherto appertains to cases of dentistry only, but the availability of the new agent for surgical purposes follows as a certain inference from such premises.

There is no operation more exquisitly painful than the extraction of a tooth firmly fixed in the jaw, and an agent which renders

the system insensible under such circumstances must be susceptible of universal application. But fortunately we are not obliged to rely on inferences from the dental practice of Dr. Wells and his associates at Hartford. We have in the following cases conclusive proof that the application of NITROUS OXYD has a range not less extensive than THAT OF THE SURGEONS KNIFE:

THE CASE OF HENRY A. GOODALE.

Extract from the Deposition of P. W. Ellsworth, M. D., Hartford, Connecticut.

"At a subsequent period, to wit: about a fortnight or three weeks before the death of Wells, I amputated the thigh of a boy by the name of Goodale, in the presence of Dr. Wells and a number of physicians. I first administered the gas and then took off the thigh just above the knee. It was a very bad case, and was well calculated to test the power of gas. The operation was entirely successful, and fully equal to any similar operation under the influence of sulphuric ether or chloroform."

There is a report of this case by Dr. Ellsworth, to be found in "The Boston Medical and Surgical Journal," vol. 37, (No. 25,) p. 498. After describing the condition of the patient as most deplorable, he proceeds as follows:

"January 1st, 1848, with the assistance of Drs. Hall and G. B. Hawley, and H. Wells and Mr. Reed, dentists, the operation was performed with the most gratifying results. The nitrous oxyd was given as recommended by Mr. Wells, having been previously thoroughly washed, a thing which greatly increases the power of the agent and the rapidity of its effects. The lad was in a very unpleasant state of mind, being greatly alarmed at the number of persons standing round, yet ten or twelve inspirations rendered him perfectly quiet. The limb was now elevated without any appearance of consciousness, and the limb was removed by the double flapp incisions about three inches above the knee."

"Upon the lad arousing from the state of insensibility, he inquired whether the leg was off. He said he did not know when the incisions were made, but did when the bone was sawed, though it was evident it was not pain which he felt, but the jar of the system, as has been expressed by older patients when under the effects of ether. After securing the arteries several stitches were taken, when the lad was in his natural state; of this he complained bitterly, and to such an extent that the gas was again given. I now cut off a portion of the popliteal nerve, which might have been pressed between the lower flap and bone, and took the last stitch. Of these he was totally unconscious. Up to the present time the patient has been mending; not the slightest bad symptom has followed, as the effect of the gas, and every anticipation is cherished of a speedy recovery under the care of his able physician, Dr. Hall."

Deposition of Eli Hall, M. D., of East Hartford, Connecticut.

"I, Eli Hall, of the town of East Hartford, County of Hartford, and State of Connecticut, of lawful age, depose and say, I have been engaged in the practice of medicine and surgery since the year 1807, and have been settled in the town of East Hartford, in the practice of my profession, for the period of fourteen years. I was somewhat acquainted with the late Doctor Horace Wells of Hartford, and was aware that he had discovered some agent by which dental and surgical operations might be performed without pain.

"About the first of January, 1848, an operation was performed on Henry Goddale, of East Hartford, a patient of mine, for the removal of the thigh. Doctor Horace Wells had been notified by me, and he desired to give an agent, the nitrous oxyd gas, to relieve of the pain of the operation. The operation was performed in the presence of a number of witnesses by Doctor P. W. Ellsworth, of Hartford, Doctor Wells administered the gas himself. The boy, during the operation was entirely quiet. I held the limb, and he made no motions. He said he felt no pain during the cutting, but said he knew when the bone was sawed. Dr. Wells gave him the gas the second time in order to allow a large nerve to be divided. I think this operation was very successful, and proved that the nitrous oxyd gas is fully equal to any agent for the annihilation of pain in dental and surgical operations.

"ELI HALL."

Dated at Hartford, the 6th day of January, 1853. Further deponent saith not.

Sworn before me, H. L. RIDER, *N. P.*

Deposition of G. B. Hawley, M. D., Hartford, Connecticut.

"I, G. B. Hawley, of the city and County of Hartford, and State of Connecticut, of lawful age, depose and say: That I am in the practice of medicine and surgry, and have been settled in the city of Hartford thirteen years, in the practice of my profession. I was acquainted with the late Doctor Horace Wells, of said Hartford, and well aware of the discovery which he had made of an anæsthetic agent for dental and surgical operations. I have no knowledge of the use of this agent, as administered by said Wells, except in the case of the boy Goodale, of said Hartford, operated on by Doctor Ellsworth, January 1, A. D., 1848, in which case the nitrous oxyd gas was administrated; this operation was performed with apparently little suffering by the boy; and on inquiry after the operation, he replied that he felt no pain when the limb was amputated.

"After the amputation under the influence of nitrous oxyd, the division of the popliteal nerve, which had not retracted sufficiently gave no suffering. Persons under the influence anæsthetic agents

often appear to suffer, while they state on recovery from the effects of gas, ether, or chloroform, that they had no pain. On refreshing my memory by reading the report of the Goodale case in the Boston Medical Surgical Journal for June 17, 1848, and written, January 8, 1848, seven days after the operation, I recognise the accuracy of the description. In all operations I have attended or performed, and find that it is necessary if they are protracted to repeat the anœsthetic agent, whether gas, ether, or chloroform, as one or the other are administered. In my former deposition, before Erastus Smith, I stated the impression made upon my mind during the operation on the Goodale boy, but with my present experience of the use of anæsthetic agents, and more mature reflection, I am aware that there may be an apparent suffering, which is not real to the patient, and this operation was as successful as other operations with ether or chloroform which I have since witnessed or performed. As far as I know, Doctor Wells is considered by the medical men of my acquaintance, as having first brought into public notice any anæsthetic agent for medical and surgical purposes.

"G. B. HAWLEY."

Dated at Hartford, the 14th day of December, 1852.

Sworn before me, H. L. RIDER, *N. P.*

After the foregoing deposition touching the Goodale case had been taken, Dr. Morton caused young man himself to be examined as follows:

HENRY. A. GOODALE.

Ques. What is your residence, age, and occupation?

Ans. I reside in East Hartford, my age nineteen years, am a cigar maker.

Ques. Have you had a leg amputated, by whom and when, and was anything administered to you to prevent pain, if yea, when and by whom?

Ans. I had a leg amputated by Doctor Ellsworth, I think 1st of January, 1848; something was given me to prevent pain by Dr. Wells, I inhaled it from a bag.

Ques. How many times did you inhale from the bag?

Ans. Twice.

Ques. Will you state whether Ellsworth requested Dr. Wells to give it again because you were in much pain?

Ans. He did.

Ques. What did Mr. Wells say when Dr. Ellsworth requested him to give more gas?

Ans. He said he thought it would not be best as I was too weak to have any more.

Ques. Did Dr. Wells decline giving any more?

Ans. He did.

Ques. During the time Dr. Ellsworth was at work upon the limb after the gas was first given did you experience great pain?
Ans. I did.

HENRY A. GOODALE.

December 18, 1852,
Sworn before, ERASTUS SMITH, *U. S. Commissioner.*

Whether Dr. Morton has advanced his pretentions by causing the forgoing deposition to be taken, it will not be difficult to determine after a perusal of the evidence subjoined, which his effort to break down the Goodale case has called forth.

Deposition of Henry A. Goodale, of Hartford, Connecticut.

"I, Henry A. Goodale, of Hartford being of lawful age, depose and say: That I resided in East Hartford in 1848, at which time, on the 1st January, my leg was cut off by Dr. Ellsworth in the presence of Dr. E. Hall, Dr. H. Wells, Henry Kilbourn, and others, but I do not remember who at the exact time of the operation. Dr. Wells gave the gas out of a large bag. I was afraid at first to take the gas, but finally was pursuaded so to do. Do not remember being taken up and brought to the edge of the bed. Remember seeing the knife, but not until the operation was over. Do not remember when the knife entered the flesh, did not remember when the knife was cut out, think I felt a kind of jar when the bone was sawed. Do not remember when Dr. Ellsworth cut off the large nerve, but remember taking gas several times. Was not sensible of suffering during the cutting and sawing. When Dr. E. began to sew up the wound it hurt me a great deal, and I asked for the gas, do not know whether more was given or not. I felt pain after the leg was taken off while it was being dressed, and after I was put back into bed. Do not think that I felt any pain until the leg was off. Am sure I was a great deal better off for taking the gas, than I should have been otherwise. I think the gas was given twice and refused once when I asked for it. I think some one said I was too weak to bear any more; this was while the stitches were being taken. Do not remember with certainty who said I was too weak. I stated in a former deposition, if I remember right, in reply to the question, "whether I experienced pain during the whole operation," that I did. I think this has been misunderstood, for I did not mean that I experienced pain continually during the operation, but merely that during the operation there was a time when I experienced pain, and that was during the dressing and tying the arteries, meaning the time after the leg was removed, but not the whole time when Dr. E. began to cut until the stump was done up, but only during the part as before expressed toward the close, during the dressing and tying the arteries. HENRY A. GOODALE."

Hartford, January 25, 1853.
Sworn before H. L. RIDER, *N. P.*

Deposition of Ralph Goodale, of East Hartford, Connecticut.

"I, Ralph Goodale, of the town of East Hartford, county of Hartford, and State of Connecticut, of lawful age, depose and say: I am the father of Henry Goodale, the boy whose leg was amputated by Dr. P. W. Ellsworth, on the 1st of January, 1848. I was present in the room immediately before the operation was performed upon my son, and I saw the gas, called nitrous oxyd, administered to him from a large black bag. Before I left the room he became utterly unconscious; and I saw him taken up and turned crossways upon the bed. His leg was brought over the edge of the bed; and all this was done apparently without pain to my son, although before the gas was given, he could not be touched or moved at all without great outcry; and even the walking across the room of any one, caused him great pain. After the gas was administered, I left the room, and before I returned, the Doctor had nearly finished the dressings, and the leg lay upon the floor, by the stove. My son has told me a great many times that he felt no pain during the operation, until the leg was off. He said the gas was given to him afterwards when the stitches were taken; and while under its influence he felt no pain. Every body present seemed to be highly pleased with the effects of the gas.

"Sometime about the last of November, 1852, Horace Cornwall, of Hartford, called at my house and made inquiries of myself and wife, respecting this operation, and talked of taking our depositions. We gave him substantially the same statement as above, and Mr. Cornwall has not since been here.

"RALPH GOODALE."

East Hartford, *January* 24, 1853.

Sworn before H. L. RIDER, *N. P.*

Deposition of Eliza Goodale, of East Hartford, Connecticut.

"I, Eliza Goodale, of the town of East Hartford, county of Hartford, and State of Connecticut, of lawful age, depose and say: I am the mother of Henry Goodale, the boy operated upon by Dr. P. W. Ellsworth, in this town, on the 1st of January, 1848. At the time of the operation my son was fourteen years of age, and very small for one of his age. He was exceedingly iritable, and had five large sores on his back where the bones could be seen. The doctors said he could not live but two or three days, unless the limb was removed. The room, at the time of the operation, was full of spectators; I was in an adjoining room with Mrs. Eliza Chandler. There was a period of perfect quietness in the room where my son was. After which I heard the bone sawed, and soon after which I heard some exclamation from my son, and went into the room; I saw the leg lying on the floor. I was immediately led out without having an opportunity to see

more. When I entered the room the next time where my son was, the doctors had gone.

"I have heard my son say a great many times since the operation, that he knew nothing about the operation, and felt no pain. He has said he had regained his consciousness when the arteries were taken up. All the persons who were present at the operation and have said any thing to me upon the subject, have expressed themselves as highly gratified with the effect of the gas said to have been given him.

"Sulphuric ether was administered to my son some weeks previous to the aforesaid operation, for the purpose of boreing the bone; but I think it could not have succeeded, as I heard his cries several rods from the house.

her
"ELIZA ⋈ GOODALE.
mark.

In presence of
"HENRY L. RIDER,
"P. W. ELLSWORTH."

East Hartford, January 24, 1853.

Sworn before H. RIDER, *N. P.*

Deposition of John H. Reed, of Windsor, Connecticut.

"I, John H. Reed, of the town of Windsor, county of Hartford, and State of Connecticut, of lawful age, depose and say: I am a surgeon dentist, residing in said Windsor, and practice my profession in that town. I was well acquainted with the late Dr. Horace Wells, of Hartford, and often saw him the office of Warren S. Crane, dentist of Hartford, with whom I studied and practiced. I had often heard Dr. Wells speak of his discovery of an anæsthetic agent, and was desirous of witnessing an operation performed under its influence.

"On the 1st day of January, 1848, learning that an important operation was to be performed in East Hartford, by Dr. P. W. Ellsworth, on a boy, Henry Goodale, while under the influence of nitrous oxyd gas, I went to East Hartford for the purpose of witnessing it, the operation. I found Dr. P. W. Ellsworth, Dr. Hall, and several men from East Hartford present. The boy Goodale, was upon the bed, very feeble and sensitive, and could not be moved or touched without crying out for pain.

"The gas was administered by Dr. Horace Wells to the boy, from a large bag. The boy, immediately after a few inhalations of the gas, became insensible. He was then brought to the edge of the bed, and his leg which was to be amputated, brought over the side of the bed. I saw Dr. Ellsworth cut the flesh round the bone, saw off the bone, cut off a large nerve, to which my attention was particularly drawn, and sew up the wound and dress the stump. I could discover no indications of pain or suffering

on the part of the boy during the cutting of the flesh, or sawing of the bone. While the stump was being dressed, the influence of the gas had somewhat passed away, and the boy then seemed conscious of pain. The gas was administered twice certainly to the boy, and he asked for it afterwards when the dressings were completed or nearly finished.

"I was highly pleased with the effects of the gas and the success of the operation. And the boy said, after the operation, he felt no pain during the cutting of the flesh, and was barely conscious of some of the last pushes of the saw. I stood where I saw the face of the boy during the whole operation, and was fully satisfied that he suffered no pain while under the influence of the gas. My express object in going to East Hartford to witness the operation was, to test the power of the gas in alleviating pain in dental and surgical operations.

"J. H. REED."

East Hartford, January 27, 1853.

Sworn before H. L. RIDER, *N. P.*

Deposition of H. P. Kilbourn, of East Hartford, Connecticut.

"I, Henry P. Kilbourn, of the town of East Hartford, county of Hartford and State of Connecticut, of lawful age, depose and say: That I was present at and witnessed an operation performed by Dr. P. W. Ellsworth, of Hartford, on the boy Henry Goodale, of this town, in the presence of many witnesses. Among them was Moses Chandler, Ransom Riley, Dr. Hall, and others. Some gas was given the boy to quiet him and alleviate the pain of the operation; the gas was given from a large bag. Dr. Horace Wells, of Hartford, administered the gas to the boy, assisted, in holding the boy, by Mr. Riley. When Dr. Wells said "now," Dr. Ellsworth and others lifted the leg up, and I saw the Doctor cut through the flesh and take the saw to saw the bone. I then stepped to the door to prevent my mother-in-law, Mrs. Goodale—the mother of the boy—from entering the room. I went out, and was absent a few minutes. On my return Dr. Wells was again giving the gas to the boy, and the leg lay on the floor. The boy was entirely still under the influence of the gas. I did not see the remaining steps of the operation, or witness the dressing. Having said that he did not know when the leg was cut off, but that he remembered one or two of the last pushes of the saw. I was entirely satisfied from what I saw that the boy suffered no pain during the operation; and I was very much pleased with the effect of the gas in preventing pain, as were all who were present. I considered it a very successful operation, and the boy made a very rapid recovery.

"HENRY KILBOURN."

East Hartford, January 24, 1853.

Sworn before H. J. RIDER, *N. P.*

Deposition of Moses Chandler, of East Hartford, Connecticut.

"I, Moses Chandler, merchant of the town of East Hartford, county of Hartford and State of Connecticut, of lawful age, depose and say: I am well acquainted with Henry Goodale, of said East Hartford, who was operated upon by Dr. P. W. Ellsworth, on the 1st of January, 1848. I was present during the operation, the dressing of the stump, and the night following. Prior to the operation the boy was in an exceedingly low state, and it was thought by the neighbors that he could not survive long, whether the limb was amputated or not. Dr. Horace Wells, of Hartford, administered the gas from a large bag, which was placed to the boy's mouth. The boy quickly became insensible, when he was taken up from the bed and turned round. Dr. Ellsworth then amputated the leg above the knee. The boy was perfectly quiet during this time. During the sawing of the bone there was a slight moan; such as I have often heard from persons asleep. There was no more expression of pain than this, until I had passed the amputated leg to some of the spectators. The boy, after the amputation, and many times since, told me he felt no pain during the operation until the leg was entirely removed. The gas was given to the boy several times. Once when the stitches were taken; and, whenever given, it had the effect of producing insensibility. The effects of the gas in producing insensibility to pain, seemed to be very happy, and the success of the operation was very gratifying. While the dressings of the stump was finishing, the boy asked for more gas, when the physicians decided he had better take no more, as it was unnecessary. This was after the stitches had been taken.

"MOSES CHANDLER."

East Hartford, January 24, 1853.

Sworn before H. L. RIDER, *N. P.*

Deposition of Ranson Riley, of East Hartford, Connecticut.

"I, Ranson Riley, of East Hartford, in the county of Hartford, and State of Connecticut, merchant, of lawful age, depose and say: I knew the late Dr. Horace Wells, of Hartford, intimately, and have had work done upon my teeth by said Wells. I was present at an operation performed on Henry Goodale, in this town, by Dr. P. W. Ellsworth on the first of January, 1848, and at the request of said Dr. Wells, I held the bag containing the gas to the boy's mouth. Dr. Wells managed the cock-stop of the mouth-piece of the bag. The boy, before the operation, was as sensitive as any one I ever saw, and could not be moved or touched without screaming. Upon taking the gas the boy became quickly insensible, the necessary movements were made. Dr. Ellsworth carried the leg over the edge of the bed, and cut it off above the knee. The boy seemed to be entirely insensible, and made no

expressions of pain until after the leg was amputated. It was a great wonder to me that a leg, which was before so sensitive, could be taken up in such a way and cut off without pain. The gas was given to the boy several times at his request, until it was thought by the physicians and Dr. Wells to be no longer necessary. Whenever the boy took the gas he was perfectly easy. When the operator commenced taking the stitches, the boy complained somewhat, when more gas was given him, and he remained quiet until this stage of the operation was finished. I think the boy asked for the gas after this, repeatedly, but the physicians decided he had better take no more, as nothing remained to be done but to complete the dressings.

"The boy appeared not to have suffered from the effects of the gas, and made a very happy recovery.

"RANSON RILEY."

East Hartford, January 24, 1853.

Sworn before H. L. RIDER, *N. P.*

Deposition of Eliza Chandler, of East Hartford, Connecticut.

"I, Eliza Chandler, of the town of East Hartford, county of Hartford, and State of Connecticut, of lawful age, depose and say: That I am well acquainted with Henry Goodale, of said East Hartford, and was with Mrs. Eliza Goodale, the mother of Henry, when Dr. W. P. Ellsworth, of Hartford, amputated the limb of said Henry, on the 1st of January, 1848. I was in a room adjoining the one where the operation was performed, and I was not aware that the operation was being performed, except by the perfect silence followed by the sawing of the bone. I went into the room soon after to get the bloody clothes. The boy was then begining to recover his consciousness. I saw the gas given from a large bag to the boy after this. If I remember correctly, the gas was given twice, and I think I heard something said about a large nerve being cut off. I saw the gas given to the boy the first time, and he quickly became insensible, and I think the gas was given twice after this. At the time the stitches were being taken I passed through the room, and the boy was then insensible. I came home very much astonished and delighted to know that such operations could be performed without pain. All the persons who were present at the operation, and with whom I have conversed, expressed the same views. It was generally thought the boy could not live through the operation, but he got along remarkably well.

"ELIZA CHANDLER."

East Hartford, January 24, 1853.

Sworn before H. L. RIDER, *N. P.*

THE CASE OF MRS. GABRIEL.

Deposition of Mary Gabriel, of Amonia, Connecticut.

"I, Mary Gabriel, of Amonia, in the county of New Haven, Connecticut, being of lawful age, depose and say: I knew the late Dr. Horace Wells, dentist, of Hartford. On the 4th of January, 1848, he, Dr. Wells, was present and administered the nitrous oxyd gas to me during a surgical operation. At that time I was residing in Bristol, and came to Hartford to have the operation performed, which consisted in the removal of a fatty tumor from my right shoulder, weighing six and a half ounces. This was performed by Dr. S. B. Berresford, assisted by Doctors Grant and Crary. Dr. Wells gave me the gas himself from a large black bag. I stopped at the time at the house of Mr. T. S. Parker, in South Prospect street, in said Hartford, where I remained until I returned to Bristol. I did not feel any pain at all during the operation, which lasted five minutes. At first I could hear a few sentences spoken by Dr. Berresford, but quickly all consciousness was gone, and I remained unconscious until the tumor was removed.

"I do not remember when I first heard of nitrous oxyd gas or ether being used for annihilating pain, but long before the operation spoken of above was performed, I had heard of Dr. Wells' discovery, and never, until after the said operation, did I hear that any one attempted to claim the honor of the discovery of the use of nitrous oxyd gas or ether for the relief of pain in surgical operations, excepting said Wells, and further the deponent saith not.

"MARY GABRIEL."

Dated at Hartford, the 12th day of January, 1553.

Deposition of S. B. Berresford, M. D., of Hartford, Connecticut.

Dr. S. B. Berresford.

Ques. What is your age and occupation?

Ans. I am forty-six, and a physician and surgeon.

Ques. How long have you resided in Hartford?

Ans. About eighteen years.

Ques. Did you know the late Dr. Wells in 1845 and 1846?

Ans. I knew him as a practicing dentist.

Ques. Have you any personal knowledge of any discovery by him of the use of any anæsthetic agent in surgical operations previous to October 1st, 1846?

Ans. I was present at no operation of the kind, and had no personal experience.

Ques. Have you ever made use of nitrous oxyd gas as an anæsthetic; if you have, when first, and who was the patient operated on?

Ans. Yes; I operated in this city, January 4th, 1848, on Mrs. Charles Gabriel, removing from the neighborhood of her shoulders, a tumor while under its influence.

Ques. Have you ever made use of nitrous oxyd in any surgical operation since?

Ans. No, sir.

Ques. Have you any knowledge of any experiment or use of any anæsthetic agent by Dr. Wells, except that derived from hearsay?

Ans. All I know was derived from hearsay, previous to the date of this operation.

Cross-examined.

Ques. When did you first hear of the discovery, by Dr. Wells, of an anæsthetic agent?

Ans. Two or three years previous to the operation.

Ques. Was not Dr. Wells's discovery a matter of great notoriety and comment, during the years 1845 and 1846?

Ans. Yes, sir; I frequently heard the matter alluded to.

Ques. Was not his discovery the subject of frequent discussion, in your medical meetings, about that time?

Ans. I cannot remember with sufficient distinctness to enable me to answer that question.

Ques. Did you, during the year 1845, hear that any other than Dr. Wells, claimed to have discovered any anæsthetic agent?

Ans. No, sir.

Ques. How large was the tumor of which you have spoken?

Ans. From recollection, I should say from five to seven ounces.

Ques. How long was the patient under the influence of the nitrous oxyd gas?

Ans. I should think six or seven minutes under its complete influence. I speak from recollection. The mass was removed in five or six minutes, and she very soon recovered her perception, after it was taken out.

Ques. Was the operation successful and satisfactory?

Ans. It was. The patient felt no pain during the removal of the tumor.

Ques. Did Dr. Wells administer the gas?

Ans. Yes.

Ques. Was not the above operation as successful and satisfactory as any you have ever performed with any other anæsthetic agent?

Ans. It was quite as successful as any, so far as destroying sensibility was concerned.

Ques. Do you know that Dr. Wells was obliged to abandon his profession sometimes, on account of ill health?

Ans. I think I remember hearing Wells make a statement to that effect.

Ques. Did Dr. Wells ever abandon his claim as the first discoverer of an anæsthetic agent?

Ans. Never, to my knowledge.

Ques. Was he not generally regarded by the profession as such discoverer? (Objected to.)

Ans. He was, by the profession in this city.

Direct resumed.

Ques. Can you state that any person of the medical profession, in this city, regarded him as the original discover of the use of an anæsthetic agent?

Ans. I cannot state any particular individual; but I know that it was the general opinion of the faculty here, that he was entitled to that credit.

Last part of answer objected to.

Ques. What do you mean by the general opinion of the faculty?

Ans. The only opinion I heard expressed.

Ques. Do you mean to say that before October, 1846, you heard the matter of any discovery of anæsthetic agent, by Dr. Wells, talked of?

Ans. Two or three years before the operation above spoken of, I frequently heard the matter alluded to. I cannot specify dates, nor answer more fully.

Ques. You say the operation you have spoken of was quite as successful as any you ever performed, so far as destroying sensibility was concerned. In what was the operatain not as successful?

Ans. The patient was very faint and depressed, for about half an hour after recovering her perception.

Ques. Was not the administration of the gas in this case attended with asphyxia?

Ans. I think not.

Ques. What was the appearance of the face of the patient?

Ans. At this distance of time I cannot remember, to speak with precision.

Ques. Have you any idea that Dr. Wells ever perfected, and brought into general use, nitrous oxyd gas as an anæsthetic agent in surgical operations?

Ans. No, sir; I do not think he did.

Ques. Is nitrous oxyd, in your judgement, a valuable anæsthetic agent in surgical operations?

Ans. I have never used it, but in the case above alluded to, and give a decided preference to chloroform, in surgical operations. L. B. BERRESFORD, *M. D.*

Sworn before ERASTUS SMITH,
U. S. Commissioner.

Extract from the deposition of David Crary, M. D., of Hartford, Connecticut.

"On the 4th of January, 1848, I assisted Dr. Berresford in removing a tumor from the sholder of Mrs. Mary Gabriel, at the

house of Thomas Parker, in South Prospect Street in this city. The nitrious oxyd was given to Mrs. Gabriel at this operation by Dr. Wells himself. After the gas was given, the bag was removed, and I think no more gas was inhaled by Mrs. Gabriel during the operation, which lasted about five minutes. Mrs. G. was perfectly quiet; appeared to suffer no pain during the operation, and so stated on her return to conciousness. I was greatly pleased with the effects of the gas. I have often seen chloroform given, and have used it myself, and in one instance I attempted to use sulphuric ether. I think the nitrous oxyd gas proved quite equal to chloroform, and greatly superior to the ether in its effects. My experiment with the ether was a failure." * * * * *

"I know that in cases of the use of chloroform, where lengthy operations have been performed, it has been necessary frequently to reapply the inhaler to the mouth of the patient. I do not recollect any case where a larger period elapsed, without a re-administration of the chloroform, than in the case of Mrs. Gabriel; and, therefore, as the gas is quicker in its effects than chloroform, and greatly quicker than ether, as induring, so far as I have seen, and pleasanter to inhale than ether, and is safer than chloroform, it certainly appears to me it would supercede both of these agents were it not for the trouble in its preparation."

"I believe the effects of ether and nitrous oxyd gas are much alike on the body; that if anæsthesia was a property found belonging to one it would be predicated of the other. It certainly would be at once suggested to any one who has witnessed the similar effects of these agents. The real merits of the case consists in proving a power of preventing pain as belonging to one of them, and this merit I fully believe belongs to the late Doctor Horace Wells."

AN ANONYMOUS CASE.

Deposition of E. E. Marcy, M. D., of the city of New York.

"I, E. E. Marcy, surgeon and physician in the city and county and State of New York, being duly cautioned and sworn do depose and say: that the article published in the Boston Medical and Surgical Journal, of September 1, 1847, being No. five of volume thirty-seven entitled "Removal of a large scirrhous testicle from a man while under the influence of nitrous oxyd gas," was written by me in Hartford, near August 21, 1847. I being at that time a resident of that city, and the said article is to the best of my knowledge and belief true.

"There were present during the operation, besides Dr. Wells, who administered the gas, and myself, Drs. Taft and Lee, of Hartford, besides other gentlemen whose names I do not recall.

"The complete success of the nitrous oxyd gas in this operation producing, as it did, entire insensibility to pain of the ner-

vous system, without, at the same time, affecting mental consciousness, together with the abscence of any bad result from its use, occasioned me from the first to place a high value upon this agent for all purposes of anæsthesia. And further the deponent saith not.

E. E. MARCY.

Sworn before E. P. C, *Notary Public.*

Extract from the Boston Medical and Surgical Journal, September 1, 1847, *No.* 27.

REMOVAL OF A LARGE SCIRRHOUS TESTICLE FROM A MAN WHILE UNDER THE INFLUENCE OF NITROUS OXYD GAS.

"The subject of the operation was a young man, 24 years of age. He had been afflicted with an enlargement of the testicle for about a year past. Within the last few weeks the disease progressed so rapibly that the lower portion of the gland and scrotum became gangrenous and sloughed. The case was highly unfavorable in every respect, yet believing extirpation to be the only means which could save the man's life, the operation was performed on the 17th of August, the protoxide of nitrogen having been previously administered by Dr. Wells, the discoverer. The patient commenced inhaling the gas at half past 1 o'clock, P. M., and after about one minute from this time the operation was commenced. At the first incision there was a slight manifestation of pain (the full effect of the gas not having yet been received,) but from this instant until the diseased mass was removed, and all the bloodvessels secured (there being quite a number which required ligatures,) there was not the slightes consciousness of pain on the part of the patient. We were satisfied that this was the fact during the operation, from the placid and happy expression of his countenance, from the entire absence of all muscular efforts, and from the natural and unexcited state of the pulse (this having remained without any apparent variation during the whole period.) The operation was necessarily tedious and protracted on account of the great size of the gland, the extensive and firm adhesion of the integuments to the diseased structure, and the unnatural enlargement of several arteries which required ligature. The whole period consumed, from the commencement of the operation until the vessels were secured, was not far from fifteen minutes. On questioning the patient afterwards, he asserted that he experienced a *slightly* painful sensation at the commencement of the first incision, but from that time until the dressings were applied he was entirely unconscious of any pain.

"After the operation, he expressed himself as feeling perfectly well, except some smarting in the wound; no pain or other un-

pleasant feeling in the head or any other part of the body; pulse regular and natural, as before the operation.

"Augest 18th.—Since the operation, the patient has suffered no pain or other unpleasant symptoms. Pulse 82, and moderately firm. Expresses a strong affection for the gas-bag, and an earnest desire to retain it in his possession as the grand balm for the pains and troubles of his life."

Extract from the deposition of Cincinnatus A. Taft, M. D., of Hartford, Connecticut.

"I was present at and witnessed an operation—the removal of a large scirrous tistule, performed by Dr. E. E. Marcy, now of New York, then of this city. The operation was performed in Hartford. Dr. Horace Wells was present among others, and administered the nitrous oxyd gas to the patient. The testicle was nearly as large as my double fist, and was removed without pain to the patient, as he said, on recovering from the effects of the gas. This operation was performed, as I recollect, about the commencement of the year 1848."

The testimony under this head can be appropriately closed by another citation from the deposition of *Professor Abner Jackson, of Trinity College, Hartford, Connecticut*, as follows:

"That I was very well acquainted with the late Dr. Horace Wells, late of said city aforesaid; that very soon after he discovered that the nitrous oxyd gas would produce insensibility to pain under dental operations, he mentioned the fact of such discovery to me. I did not previously know that it would produce such effect, but the moment he mentioned it, I perceived at once, from my knowledge of the properties of this agent, that the discovery was genuine. This was long before any thing was known in this community of the claims of Dr. Morton. I had previously been in the habit of administering nitrous oxyd gas, and had seen many under its influence. I had been under its influence myself, and from my observations I was satisfied it might produce the effect which Dr. Jackson said it would. The discovery of Dr. Wells became immediately known in this city, and was the subject of frequent conversation among those who took an interest in such matters, and he is universally believed here to have been the first to discover the anæsthetic properties of this agent." * * * * "He understood well and seemed to appreciate highly the importance of this discovery, and to him should, in my judgment, be awarded the whole merit of this boon to humanity. *Dr. Wells was a person of a peculiarly philosophical turn of mind, and was very much more than an ordinary person.* I was in the habit of employing him in his profession for many years, and took a deep

interest in his conversation. He was accustomed to extend his inquiries much beyond the scope of his profession, and was well suited to make such a discovery."

The complication and extent of the evidence here adduced, touching the proceedings of Dr. Wells and his friends, at Hartford, consequent on his great discovery, would seem to make some observations proper, if not necessary.

1. Every impartial mind must, in view of the facts proved, be deeply impressed by the many admirable traits of character displayed by Dr. Wells. The utmost probity, sincerity, frankness, and disinterestedness, characterized his course from beginning to end. Unlike Dr. Jackson, if his pretensions be well founded, he did not make a great and vital discovery and then lock it up in his own breast for years, and unlike Dr. Morton, he did not resort to artifice to conceal his footsteps and to shroud himself in darkness, but no sooner had the great idea entered his mind than he caused it to flash out like the noonday-sun. Nor did he endeavor to make merchandize of the new art, or seek to secure to himself exclusive privileges by the agency of our patent laws. He had made a discovery dear to humanity, and gave it to mankind. The idea of seeking a reward at the hands of Government, never entered his heart, nor is it sought now by his family, though poor and destitute, except in resistance of the groundless pretensions of Wm. T. G. Morton. And his self-sacrificing spirit was not less remarkable than his rectitude and disinterestedness. No sooner had he conceived the idea of anæsthesia than he determined to submit his own person to the hazards of the experiment, and it was done. Let the reader compare his course in this respect with that of Dr. Morton, as discribed by himself in his memoir to the French Academy, for which see what purports to be the report of the Hon. Mr. Bissell, House of Representatives last session of Congress, pp. 11, 12, and 13.

2. Perhaps few men have been better suited to make such a discovery than was Dr. Horace Wells. Dr. Riggs says of him, he "was enthusiastic and sanguine in the pursuit of objects to which he turned his attention." Dr. Marcy says, "he possessed a peculiarly active, investigating, and philosophical mind, and was, therefore, almost constantly engaged in researches and inquiries, such as would naturally attract the attention of a man of his taste." Dr. Ellsworth says, "he possessed an active and inquiring mind, was inventive and versatile, his mind passing with great rapidity from subject to subject, and this gave to his course the appearance of fitness, at least to some extent;" and Professor Jackson says that "he was a person of a peculiarly philosophical turn of mind, and much more than an ordinary man."

3. He not only promptly brought his conception of anæsthesia to the test of experiment, but pursued it with a vigor and enthusiam of which it would be difficult to find a parallel. "He understood well," says Professor Jackson, "and seemed to appreciate

highly the importance of his discovery." Hence he visited Boston in one short month after that discovery was made, to make it known to the faculty there with a view to its introduction into general surgical and dental operations, and although he was repelled with incredulity, if not with derision and contempt, and although he returned to Hartford with his feelings greatly wounded and his spirits depressed, yet his confidence in the new agent was not shaken in the least. He strenuously insisted that he could convince any one of the truth of his allegations, who would give the subject a candid investigation, and that within five years anæsthesia would become universal in surgical practice. He not only consecrated his energies night and day, for weeks and months, to the extraction of teeth, but was incessantly making experiments with a view to improvement in the new art. "During the time he was engaged in his profession," says Dr. Terry, "he continued to make improvements in the construction of his inhaling apparatus, in the nitrate of amonia, of which the gas was made, in the gas itself and its mode of preparation, from the time of his discovery to his death." "I know," says Dr. Ellsworth, "that Dr. Wells, from the time of his discovery up to the time of his death, was making improvements, both in the preparation and mode of administering the gas, and ultimately it became in his hands more efficient than it was in the first instance; the gas was more pure and the instruments were better."

4. There is a fact mentioned incidentally by Mr. Norman W. Goodrich, in his deposition, which will serve to illustrate, in a very striking manner, the extent to which Dr. Wells carried the use of the gas immediately after his discovery, December 11th, 1844. He says that he first attended the extraction of a tooth for Mr. J. G. Wells, while under the influence of the gas, during that same month, and he then adds: "A few days after the above experiment, Mr. Wm. H. Burleigh and myself went to Dr. Wells's office to have teeth extracted." * * * "This was just before dusk. When we entered the office we found among others a boy who held a large tooth in his hand, which he showed us, saying Dr. Wells had just extracted it for him, under the influence of the gas. He said he felt no pain, and did not know when the tooth was pulled. Mr. Burleigh and myself told him we had come to take the gas and have teeth extracted. Dr. Wells replied that *he had been giving the gas and pulling teeth all day and was so tired and lame in consequence, that he was unable to do any thing more that day*, but that if we wanted our teeth out then he would administer the gas and let Dr. Riggs come in and draw the teeth. We agreed to this arrangement," &c.

5. The efficiency of the gas for anæsthetic purposes, and its truly delightful effect, is expressed by Mr. F. C. Goodrich in language so just and so appropriate, that it cannot fail to attract and fix the attention of all who are inquiring for the truth. Mr. Goodrich says that "in a few seconds after I commenced inhaling the gas, I fell into a stupor and partially unconscious state, expe-

riencing at first a sense of numbness in my limbs, followed by an indescribably rapturous or pleasurable sensation of the brain, and increasing in intensity until I seemed, as it were, a mere spark or atom of matter floating away in the regions of space."

"I was not, however, wholly unconscious during the entire operation; I knew when the instrument was applied to the tooth, and heard remarks by those present, but I neither felt nor feared pain, nor do I believe it possible to have inflicted pain upon me in any manner during the time my nervous system remained entirely under the influence of the exhilarating gas." * * *

The deposition of Mr. Goodrich is from his own pen, and as a specimen of tasteful composition, would do no discredit to the best writers of modern times.

6. The proof in favor of the gas as perfectly safe and uniformly successful, is full and conclusive. Dr. Riggs says that:

"Several weeks elapsed after making the discovery before Dr. Wells went to Boston, and during that time operations were many times performed upon the teeth by him and myself with this agent with the most salutary results, for we never had a failure, and the success was better than I have since had with ether or chloroform. I consider it a better agent on the whole than either of the others."

The testimony of Doctors Ellsworth, Marcy, Crary, Terry, and others, are to the same effect. Let the reader turn to the case of Henry Goodale, and observe how wonderfully—nay, miraculously, the nitrous oxyd operated under the most painful and distressing circumstances. Any one capable of producing such results by an unknown agency, would, a few years ago, be believed to be endowed with a supernatural power. It is impossible for any candid man to doubt the availability of the gas for anæsthetic purposes who will attend to the proofs before us? It has not failed in a single instance when properly prepared and properly administered, and is believed to be fully equal to the best of the other agents. And yet Dr. Morton, in face of such an overwhelming mass of testimony, has the assurance to deny its availability, and even to insist that it is dangerous—that it would produce in some cases asphyxia. It is fortunate for the cause of truth and justice that his opinions are likely to have little weight with Congress, and produce little effect on the final settlement of the question by an enlightened public judgment.

7. The successful application of the nitrous oxyd to the extraction of teeth long before Morton's pretended discovery, and that too in a multitude of cases, furnishes proof conclusive that it was equally available in surgical practice. No respectable surgeon can be found but that will say that a severe dental operation without pain establishes conclusively the availability of the agent in a surgical case, no matter what it may be. Doctor Wells ever contemplated the extension of his agent from dentistry to surgery; he was incessantly meditating such an extension.

He said to Dr. Terry, on his return from Boston, in January, 1845, "there was too great hurry, or some defect in preparing the gas, or that the amonia perhaps was not good, but he still expressed a determination to convince the world that it was a valuable discovery, and a full belief that any surgical operation could be performed without pain under the influence of the nitrous oxyd gas." What if the operation in the presence of Dr. Warren's class had been fully successful, and what if there had been in Boston at that juncture a little less incredulity, and what if they had known more of the true character of Horace Wells, of his lofty and generous spirit, and of his acute, inventive, ingenious, and truly philosophical mind. The great fact so interesting to humanity would have then been developed, and would have been thrown into the hands of men competent to appreciate its value and to do it justice. But Dr. Wells labored under great disadvantages. It is true he was surrounded at Hartford by highly accomplished physicians and surgeons, and equally accomplished practitioners of the dental art, but there were no medical institutions, no hospitals, and no corps of learned Professors there, with organs of publicity in the form of medical and surgical journals. Dr. Ellsworth says, "I had then" (that is to say in 1845) "an idea of trying this agency in more important operations, but I was young in the profession, and it was necessary for me to proceed with caution." But Dr. Wells did bring the nitrous oxyd gas to a test in a capital operation in the Goodale case on the first of January, 1848. Dr. Marcy did the same thing in the anonymous case, (the characters of which need not be repeated here,) and Dr. Barresford in the Gabriel case, both about the same time. It is conclusively proved that the nitrous oxyd is available in cases of every character, is fully equal to if not better than chloroform or chloric ether, and is much better than sulpuric ether. The reasons for this conclusion are stated by Dr. Ellsworth and several other witnesses who have used all these agents, and who are competent to appreciate and compare their value.

8. There is one fact which stands out in front of this whole controversy, which no ingenuity can undermine, no artifice elude, and no strength overthrow, and that is, that *Horace Wells was the first being on whom an anæsthetic operation was performed in the modern sense of that term.* He was the first individual *who inhaled a gaseous or vapory substance to paralize the nerves of sensation; and the first who submitted to an operation after that paralysis had been effected.* When we come to add to this great leading fact, all the vast array of other facts establishing incontrovertably the efficiency and availability of nitrous oxyd, first last, and at all times; and when a cloud of witnesses, disinterested and upright, come forward and speak of the efforts and successes of Horace Wells, and of the validity of his claims, it would seem that mere hardihood of asseveration or impudence of pretension must be of little avail.

V. The ascertainment of the anæsthetic properties of sulphuric ether, by Dr. Wells and his friends, at Hartford, soon after his discovery of December 11, 1844;—the reasons why nitrous oxyd gas was preferred to the vapor of ether

Extract from the deposition of E. E. Marcy, M. D., of the city of New York.

"Witnessing these wonderful phenomena—these new and astounding facts, the idea at once occurred to me whether there were not other substances analagous in effects to the gas, and which might be employed with more convenience and with equal efficacy and safety. Knowing, as before remarked, that the inhalation of sulphuric ether vapor produced similar effects to those of the gas, from numerous former trials, as above alluded to, I suggested to Dr. Wells the employment of the vapor of rectified sulphuric ether, at the same time detailing to him its ordinary effects, upon the economy, and the method of preparing the article for use. Our first impression was that it possessed all the anæsthetic properties of the nitrous oxyd, was equally safe, and could be prepared with less trouble, thus affording an article which was not expensive, and which could be always kept on hand. At the same time I told Dr. Wells that I would prepare some ether and furnish him with some of it to administer, and also make a trial with it myself in a surgical case which I expected to operate on in a few days. This conversation took place in Dr. Wells office at the time the tooth was extracted from Mr. Goodrich. Accordingly, within two or three days after that event, I administered the vapor of rectified sulphuric ether in my office to the person alluded to in my conversation with Dr. Wells, and after he had been rendered insensible to pain, I cut from his head an 'encysted tumor,' of about the size of an English walnut. Dr. Wells came in during the operation and sufficiently early to form an opinion upon the subject. It was entirely successful, and conclusively proved to Dr. Wells and myself the anæsthetic properties of ether vapor. Dr. Wells then wished me to investigate the subject carefully, and endeavor to ascertain whether this vapor was as safe as the gas. He informed me that Dr. Riggs had told him that he had inhaled both of these substances when in Washington (now Trinity) College, and that it was his impression, from the effects of the two upon himself and others, as well as from the views inculcated by Professor Rogers in his lectures upon these substances berore the class, that the inhalation of the ether vapor was more dangerous than that of the nitrous oxyd gas. Accordingly, at the urgent request of Dr. Wells, I read what could easily be procured in relation to both articles, and formed the opinion that the constituents of the gas were more nearly allied to the atmospheric air than those of ether vapor, that the former was more agreeable and easy to inhale than the latter, and upon the whole was more safe and equally efficacious as an anæsthetic

agent, which opinion I communicated to Dr. Wells. All this took place before Dr. Wells went to Boston to announce his discovery to the faculty there."

The Statements of Dr. Marcy are strongly confirmed by the following extract from the deposition of F. C. Goodrich, Esq.

"Immediately after this operation, to which I submitted," (referring to the extraction of one of his teeth, which he so beautifully describes,) "a conversation ensued between Drs. Marcy and Wells in regard to the use of ether as a substitute for nitrous oxyd in favor of its use as being more easily prepared, though not as safe to use, and nearly if not positively identical in its effects upon the nervous system. Dr. Marcy expressed himself as perfectly familiar with the effects of ether on the system, and decided to use it in a surgical operation which he was shortly after to perform."

Further confirmation of the statements of Dr. Marcy, in the deposition of Francis A. Thomas, of the city of New York.

New York, *December* 19, 1852.

"This may certify that during the month of December, 1844, being in the office of Dr. E. E. Marcy, of Hartford, Connecticut, I heard the Doctor in conversation with a gentlemen on the subject of Dr. Horace Wells' experiment in extracting teeth without pain—a matter at that time of general remark among the community. After the departure of the gentleman, being curious to know more of this subject, I inquired of Dr. Marcy regarding the substance used by Dr. Wells in his experiments. He informed me that it "was nothing but 'laughing gas,' with which all were familiar," or something to this effect. In the course of this conversation I distinctly recollect Dr. Marcy told me that other substances had powerful effects in diminishing nervous sensibility, and that he intended, as soon as he could find a willing subject, to make some experiments with sulphuric ether. Dr. Marcy then went to a case and took a vial which he said contained this substance and told me to smell of it, remarking, on my manifesting some timidity, that I need not be alarmed, at the same time taking back the vial and smelling of it himself. After this I inhaled some of it myself. I have since become familiar with this substance and recollect its odor perfectly well. From the conversation with Dr. Marcy, alluded to above, I became fully satisfied of the similarity existing between nitrous oxyd gas and the vapor of sulphuric ether, in their anæsthetic effects on the system when inhaled. The only question at that time seemed to be which of these two agents was best adapted for surgical use; and it was

with the view of deciding this question that Dr. Marcy had procured the ether (which I saw and partially inhaled) for the purpose of administering it whenever an opportunity offered. The Doctor spoke of the anæsthetic virtues of ether as a fixed fact, he having previously repeatedly experimented with it on himself. I also recollect that at this interview Dr. Marcy informed me that he had a patient suffering from a tumor on the scalp, which he intended to remove in the course of a short time, and that if possible he should administer the ether in this case, with the view of ascertaining its true anæsthetic properties in painful surgical operations. I further certify that a few days after this conversation I had a carious tooth extracted by Dr. Riggs, of Hartford, while I was rendered completely insensible by means of nitrous oxyd gas."

"My present occupation is the study of medicine at the College of Physicians and Surgeons, in the city of New York."

FRANCIS A. THOMAS.

Sworn before

H. A. KERR, *Commissioner of Deeds.*

Extract from the deposition of Dr. John M. Riggs, of Hartford, Connecticut.

"Some years before, while attending on a course of lectures by Professor Rogers, being then a student in Trinity College, in this city, I had been taught that sulphuric ether produced effects similar to nitrous oxyd gas upon the human system, but was cautioned by the Professor not to use it, as it was dangerous to life. I communicated to Dr. Wells the views of Professor Rogers, and the propriety of using sulphuric ether in dental operations was the subject of conversation between me and Dr. Wells, but we were deterred from experimenting with it by the warning of Professor Rogers. This conversation followed immediately after the discovery of the effects of nitrous oxyd gas; and the reason why we spoke of a substitute was the labor of preparing this gas, and its bulk."

Extract from the deposition of P. W. Ellsworth, M. D., of Hartford, Connecticut.

"Very early after the discovery of Dr. Wells, and before I heard anything of the pretensions of Dr. Morton, to wit: some time in the year 1845, Dr. Wells spoke to me respecting the comparative safety of nitrous oxyd gas and sulphuric ether, and I gave him my opinion in favor of nitrous oxyd gas, and advised him to confine himself to the use of that agent."

Extract from the deposition of John Gaylord Wells, of Hartford, Connecticut.

After having stated that he had one tooth extracted while under the influence of the gas in the month of December, 1844, and a number after at different times, and all without pain, he proceeds as follows:

"On one occasion sulphuric ether was administered by Dr. Wells. I am quite sure it was early in 1845, a long time anterior to the period when Dr. Morton, of Boston, first announced his discovery. The ether was unpleasant in its effects, though the tooth was extracted without pain. I therefore advised my friends not to use it, but rather the exhilirating gas."

"The number of teeth extracted under the influence of the gas was five, and one under the influence of ether. In my former deposition it was stated six were extracted. It might be inferred that it was at one sitting. They were extracted, however, at most part at different sittings. Only once did I have two removed at a time. I am sure the ether was given early in 1845. The ether was not given from a bag, but from some different apparatus."

Deposition of Prof. Valentine Mott, M. D., of the city of New York.

"I, Valentine Mott, of the city of New York, surgeon, do affirm, that the first intimation I ever had of the probable application of the influence of the nitrous oxyd or sulphuric ether, to obliterate all consciousness of pain in surgical operations, was derived from the late Dr. Wells, of Hartford.

"When on a visit to New York he called upon me and made the fact known. He stated that he had used ether for the extraction of teeth, and he believed it might be employed for the same purpose in great surgical operations.

"As he first applied the ether for the purpose of producing anæsthesia, he is fully entitled to the credit and honor of the discovery.

"This interview was some time before any publication was made anywhere on the subject.

"My impression is that as various chemical agents will produce anæsthesia, they all may be used with proper care. I began with sulphuric ether, but after Dr. Simpson, of Edinburgh, sent me his pamphlet, I immediately had the chloroform made, and have used it ever since, and am perfectly satisfied with it."

VALENTINE MOTT.

New York, December 20th, 1842.

Sworn to before me this 23d day of December, 1842,

HENRY A. KERR, *Commissioner of Deeds.*

As we are on the subject of sulphuric ether, the following letter from a highly respectable surgeon in the United States Army may be as properly introduced here as elsewhere:

Letter from J. B. Porter, M. D., Surgeon in the U. S. Army.

"WASHINGTON, D. C., *January*, 27, 1853.

"DEAR SIR: In relation to anæsthetic agents, for subduing pain in surgical operations, the following brief statement is submitted. Many years ago, the suggestion of Sir Humphry Davy was the subject of discussion among the medical students of my class, but the honor of having put the ideas and suggestions of others into practice, I have always believed to be due to the late Dr. Horace Wells, of Hartford, Connecticut. I well remember to have seen him announced as the discoverer of this boon to mankind, a considerable time before the names of Jackson and Morton were heard of on the subject; and I was surprised to learn that the latter, claiming to belong to an honorable profession, had taken out a patent for 'letheon,' or, in other words, sulphuric ether. Did the immortal Jenner take a patent for his great discovery? Did M. M. Pelletier and Coventou take a patent for their discovery, which is a blessing to mankind?

"Sulphuric ether was used as an anæsthetic in amputations of limbs in injuries from gun shot wounds, in the summer of 1849, at Vera Cruz, Mexico, in the General Hospital, of which I was chief surgeon; and my experience with it was not satisfactory, but the reverse, and the employment of it was abandoned. It poisons the blood and depresses the nevous system, in consequence, hemorrhage is much more apt to occurr, and union by adhesion is prevented. I consider chloric ether a much better anæsthetic agent than either sulphuric ether or chloroform. The nitrous oxyd gas might be better than any of them, if it could be as easily administered.

"I have recently noticed, with surprise, in a pamphlet containing the report of the Hon. Wm. H. Bissell, chairman of the Select Committee of the House Representatives, to whom was referred the memorial of Dr. Wm. T. G. Morton, appendix B. p. 103, the following over my own signature: '*Sulphuric ether was used in the General Hospital at Vera Cruz, Mexico, in the summer of* 1847. *I had charge of that hospital.*' This is an isolated extract, and it is opposed to the general tenor of my whole communication to the Hon. Mr. Bissell, which is adverse to the use of sulphuric ether in operations for gun shot wounds. This detached passage makes me say, or appear to say, what was never intended, and I must protest against the proceeding.

"Please to excuse this hasty letter, for it is necessary that I leave to-morrow or the day after.

"Very respectfully, sir, your most obedient servant,

"J. B. PORTER, *M. D.*

"*Surgeon U. S. A.*

"Hon. TRUMAN SMITH, *U. S. Senator.*"

It should be stated, in justice to the committee of the House, that appendix B was obviously no part of the report of the committee, but was added by Dr. Morton, who has the responsibility of garbling the letter of Surgeon Porter.

The proofs adduced under this head call for the following remarks:

1. We have, in the facts stated by Doctors Marcy, Ellsworth, and Riggs, and by Messrs. Goodrich and Thomas, full confirmation of the opinions expressed by Professors Jackson, Parker, Francis, and others, that it being known that nitrous oxyd gas would produce insensibility to pain under dental and surgical operations, it would at once occur to any well-informed person that sulphuric ether would produce the same effect. Suppose Dr. Marcy, in consequence of suggesting ether after Wells had used the nitrous oxyd, had advanced pretensions as a discoverer, might we not reply, in the language of Professor Parker, that the substitution of the ether for the gas, after Wells had settled the principle, "does not deserve the name of discovery"!

2. The question of priority even as respects sulphuric ether must be decided against Dr. Morton. The anæsthetic properties of this substance were as well established at Hartford in the winter of '44–5, if not as well known to the public, as they have been at any time in Boston.

3. Nor is that question in the slightest degree affected by its non-introduction into general use at Hartford. Dr. Wells had the choice of two agents, both ascertained to possess anæsthetic properties—he preferred the gas. What if he decided wrong? Does that error over-rule his pretensions as a discoverer of both? Dr. Marcy claims no credit for the suggestions which he made in respect to sulphuric ether to Dr. Wells; he has never been so absurd as to make any pretensions on that account. The whole investigation was originated by Dr. Wells—was conducted by him at his own risk, and on his sole responsibility; and it does not detract in the slightest degree from his merit because his friends gave him hints as he went along.

4. Dr. Wells had, then, two agents, to either of which he could resort in his practice, both known to have anæsthetic properties, and he decided in favor of the gas; and the proof is ample that he decided right. No candid man, who will carefully look over the proofs, can fail to come to the conclusion that nitrous oxyd is a quicker, a pleasanter, and a safer agent than sulphuric ether. Dr. Riggs says: "I have used ether a few times, but with such unsatisfactory results as to abandon it, as being inferior to the gas, and I thought more unsafe. Some could not be brought under the influence of sulphuric ether so as to destroy sensation." Dr. Ellsworth says that "ether is slow in producing an effect, and disagreeable—while nitrous oxyd gas is in both particulars the reverse." * * "The effect of the gas, after the insensibility has passed away, is pleasanter than ether. The latter, during its administration, not unfrequently causes vomiting and nausea." * * "Nothing prevents my using the gas now, but the circumstance of convenience." J. Gaylord Wells (who had five teeth extracted while under the influence of gas, and one while under the influence of ether) says: "The ether was unpleasant in its

effects, though the tooth was extracted without pain. I therefore advised my friends not to use it, but rather the exhilarating gas." Mrs. Eliza Goodale, (the mother of Henry A. Goodale,) after describing the beautiful operation of the gas in the case of her son, says: "Sulphuric ether was administered to my son some weeks previous to the aforesaid operation, for the purpose of boring the bone, but I think it could not have been successful, as I heard his cries several rods from the house." Dr. Crary says that the gas is quicker than chloroform and greatly quicker than ether, is more safe, and as enduring as the former, and much pleasanter than the latter, and "it would," as it appears to him, "supersede both of those agents, were it not for the trouble in its preparation;" and Dr. Marcy says that, on full inquiry as to the comparative value of these agents, he came to the conclusion that "the constituents of the gas were more nearly allied to the atmospheric air than were those of ether vapor, and that the former was more agreeable and easy to inhale than the latter, and, upon the whole, more safe, and equally efficacious." It must be borne in mind that these were the opinions of gentlemen who were perfectly familiar with the effect and operation of both agents, and therefore they are entitled to great weight. And then what are we to think of the statements of J. B. Porter, of the United States Army, who, on thorough trial in many cases of gun-shot wounds, utterly repudiated ether. One would suppose that the Government ought not pay much to Morton for his humbug patent, if the views of Dr. Porter are correct.

It must not be inferred from these remarks that the anæsthetic properties of sulphuric ether are denied; on the contrary, they are fully admitted. But the inferiority of such properties to those of the nitrous oxyd is insisted on, though the point is not material to the present controversy.

Dr. Morton thus has taken one of two agents used by Dr. Wells, and at a subsequent period by nearly two years, applied that agent precisely in the same manner and to the same purpose for which he (Dr. W.) had applied both, and happening to catch the ear of the learned Professors of Boston, (which Dr. Wells could not do,) he all at once bursts upon the world as the great discoverer of anœsthesia; and having bedecked his brows with borrowed plumes, he presents himself to Congress in the guise of a great public benefactor, with hands as audacious for the contents of the Treasury as they have been for honors due to the memory of the lamented Horace Wells. How far he will suceed in snatching either the one or the other, it will not, in view of facts brought to light in the progress of this inquiry, be difficult to determine.

VI. Here would seem to be the proper place to take some notice of a certain paper, printed by Dr. Morton, and laid on the table of Senators at the last sesson, purporting to be the report of a select committee of the House of Representatives, to whom was

referred, at the same session, the memorial of Morton asking remuneration from Congress for the discovery of the anæsthetic properties of sulphuric ether. In point of fact, no report has ever been submitted to the House, though doubtless some report was agreed on by a majority of the committee, but their powers expired with the session, and not having been renewed, the whole inquiry, so far as that committee is concerned, has fallen through. The measure, which seems to have been adopted by the committee of permitting, a party in interest to take a copy of an unpresented report, and to publish it at his own expense, is, to say the least, unprecedented, and the practice may be attended with serious abuses. The impropriety of this course is strongly illustrated by the fact, that one of the majority (Hon. Mr. Rantoul) was unfortunately shortly after removed by death, and his substitute, the Hon. Mr. Evans, of Maryland, came to conclusions on the merits directly the reverse of those at which his predecessor arrived. We have no guaranty that this paper has been correctly printed by Morton, and grounds will appear hereafter for doubting its accuracy. But, however this may be, it will be recollected that this paper, so irregularly placed before the Senate, was at the last session urged on the attention of the body as an authoritative adjudication of the whole matter, and as constituting a sufficient basis for granting to Morton the large sum of one hundred thousand dollars. A few extracts from the report containing what the committee had to offer in the proceedings and discoveries of Dr. Horace Wells, will, in connexion with the facts already established, enable us to determine without much difficulty how far it will do to rely on their opinions and conclusions:

Extract from page 7.

"About half a century since, Sir Humphrey Davy, who had acted as an assistant to Dr. Beddoes, in the commencement of his career, suggested the possibility that a pain-subduing gas might be inhaled, as follows: 'As *nitrous oxyd*, in its extensive operation, appears capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place.' *Researches on Nitrous Oxyd, p.* 556. *Upon this hint, Dr. Horace Wells, of Hartford, Connecticut, in the autumn of the year* 1844, *experimented with nitrous oxyd gas in the extraction of teeth; but this gas being found on trial to be unavailable for the desired purposes, he abandoned his experiments in December,* 1844, *and tried none afterwards.*"

Extract from pages 18, 19.

"It is proved that prior to 1844, Dr. Morton was associated in practice with Dr. Wells as a surgeon dentist. That afterwards he become a student of medicine with Dr. Charles T. Jackson, and a boarder in his family. *That in pursuance of the suggestion of Sir Humphrey Davy, mentioned above, Dr. Wells was experiment-*

ing on nitrous oxyd, and professed to have been successful in several instances in extracting teeth without pain from patients under its influence. That in the winter of 1844–'5, Dr. Wells came to Boston and desired to make public exhibition of his alleged discovery, when Dr. Morton, as his friend, obtained permission for him to exhibit before a public assembly, and himself assisted on the occasion. The experiment of Dr. Wells proved a failure: he was greatly mortified, and presently abandoned the pursuit.

"It is very reasonable to suppose that this attempt of Dr. Wells, although it resulted unfortunately, did, in connexion with his profession and his previous studies, turn the mind of Dr. Morton still more strongly in that direction. He certainly had just reason to hope that, although nitrous oxyd would not produce the desired result, he could find some other gas or vapor which would."

Extract from page 73.

"The claim in behalf of Dr. Wells rests on his experiments with nitrous oxyd, referred to by your committee in the early part of their report. He had the merit of attempting to carry out practically the idea suggested by Sir Humphrey Davy, of rendering by its influence a patient insensible to pain in a surgical operation. He has also undoubtedly the merit of having contributed something in directing the mind of Dr. Morton to the subject, and thus aided in conferring this great boon upon mankind. Originally he did not claim for himself the honor of the discovery, but merely of the attempt, which he admitted to have been fruitless."

Extract from page 75.

"The evidence presented with Dr. Wells' claim shows that dental operations were in several instances performed without pain by Dr. Wells under the influence of nitrous oxyd, which had been before known in some cases to produce a total or partial asphyxia. It appears also that the vapor of sulphuric ether was thought of, discussed, and finally rejected by him—while the total abandonment of the use of nitrous oxyd, and indeed of every other agent, shows that Dr. Wells' experiments were, on the whole, unsuccessful. He engaged in the search and failed to find the object of his pursuit. He attempted and endeavored assiduously to carry out the idea to practical results, but was not successful. There was great merit in the effort, but it proved a failure.

"Dr. Wells, therefore, in the opinion of your committee, is not entitled to the honor of the discovery. He stopped half way in the pursuit. He had the great idea of producing insensibility to pain, but he did not verify it by successful experiments. He mistook the means, and he unfortunately rejected the true anæsthetic agent as dangerous to life, and therefore did not make the discovery and give it to mankind. He did what Dr. Beddoes, Sir Humphrey Davy, and Dr. Townsend had done about the close of the last century, but nothing more.

"But he had the signal merit of reviving the investigation, and, probably, of hastening the discovery."

Extract from pages 77 and 78.

"Upon a full examination of the whole case so far as time and means were afforded to your committee, they have come to the conclusion—

"1st. That Dr. Horace Wells did not make any discovery of the anæsthetic properties of the vapor of sulphuric ether, which he himself considered reliable, and which he thought proper to give to the world. That his experiments were confined to nitrous oxyd, but did not show it to be an efficient and reliable anæsthetic agent, proper to be used in surgical operations and in obsterical cases."

These statements and opinions furnish an example of mistake and misconception for which it would be difficult to find a parallel in the annals of legislation. It is true that the case of Dr. Wells was not represented by counsel nor sustained by one-fourth part of the proof now adduced in its favor. Both Dr. Morton and Dr. Jackson were heard at length by learned and able counsel, who were employed several days, it is understood, in addressing the committee, while the destitute widow and child of Dr. Wells could not avail themselves of such aids. But evidence enough was placed before the committee to put them on their guard, and to exclude utterly such a broad and wholesale repudiation of the pretensions of a man who is believed by many of the ablest men of the country, and is now proved to have been the real author of anæsthesia. Let us see what this committee allege:

1. That Dr. Wells, in commencing his experiments with nitrous oxyd gas, acted on a hint to be found in the writings of Sir Humphrey Davy, whereas the proof is conclusive, he derived his hint from the occurrences of Colton's lecture. It is not probable he ever saw the passage quoted from Davy, or ever read a word of his writings.

2. That nitrous oxyd "proved *unavailable for the desired purposes*," whereas there was an abundance of evidence before the committee, and much more before us now, to show that it was available and uniformly successful.

3. That "HE ABANDONED HIS EXPERIMENTS IN DECEMBER 1844, AND MADE NONE AFTERWARDS!" When we recur to the worthy and truly honorable names appended to the report it is difficult to believe that such an allegation is to be found in it.

4. That Dr. Wells "*professed* to have been successful in several instances in extracting teeth without pain" for patients under the influence of the gas; as if the claims, Dr. Wells' were based exclusively on *profession*, and were unsustained by proof.

5. That "the experiment of Dr. Wells," at Boston, "proved a failure; he was greatly mortified, and presently abandoned the pursuit." The committee first allege, "he abandoned his experi-

ments in December 1844, and tried none afterwards;" they now say he abandoned them presently, after his return from Boston, which was in January, 1845. It is to be regretted that a little more attention had not been bestowed on fixing the date of the supposed abandonment, of which nobody dreamed at Hartford—an abandonment which, according to the committee, occurred at the very time Dr. Wells was, as now appears by incontestable proofs, pursuing his experiments with the greatest possible enthusiasm, and with uniform success.

6. That "*originally he did not claim for himself the honor of the discovery, but merely of the attempt which he admitted to have been fruitless.*" To justify this extraordinary statement, reference is had to a correspondence between Morton and Wells, and to a letter from R. H. Eddy, which we will examine hereafter, and show that the assertion is groundless.

7. But the committee, after having asserted positively that the nitrous oxyd gas was "found, on trial, to be unavailable," graciously admit that "the evidence presented with Dr. Wells' claim shows that dental operations were in several instances performed by him without pain, under its influence," but then they proceed at once to strip the agent of all merit by the suggestion that "it had been known before, in some cases, to produce partial or total asphyxia." That any of these agents may, by rashness, be made to produce asphyxia, is doubtless true, but that nitrous oxyd is any more likely to do so than the other agents, is utserly denied. Nothing of the sort ever occurred in the practice of Dr. Wells and his friends at Hartford, and this introduction of asphyxia in connection with the gas would seem to indicate "a foregone conclusion" against the claims of Dr. Wells.

8. "It appears also," say the committee, "that the vapor of sulphuric ether was thought of, discussed, and finally rejected by him; while the total abandonment of the use of nitrous oxyd, and, indeed, of every other agent, shows that Dr. Wells' experiments were on the whole unsuccessful." Yea! Gentlemen of the committee, not only thought of and discussed, but actually experimented on! and its anæsthetic properties ascertained! long before the pretended discovery of Dr. Morton; and, only not used, simply because the nitrous oxyd was deemed the better agent. And then it would seem that the committee could hardly indite a single paragraph without lugging in the idea of, "a total abandonment" of, the nitrous oxyd by Dr. Wells; but the assertion would seem rather to indicate "a total abandonment" of all the rules which have hitherto regulated the conduct of mankind in weighing testimony.

9. "*But he had,*" conclude the committee, "*the signal merit of reviving the investigation, and probably of hastening the discovery.*" Ah! then it would seem Dr. Morton got the information on which he acted from Dr. Wells. We will see by-and-by whether that information was not something more than a mere hint, and whether the discovery, fully developed and perfected, was not re-

vealed to him, and whether his efforts since, to appropriate its honor and emoluments to himself do not constitute a foray into the domain of science, which may be properly characterized as piratical.

Nothing disrespectful is, by these suggestions, intended to the honorable committee, whose motives no one can justly question, but some freedom of remark was indispensable to show the glaring injustice done by them, no doubt unwittingly, by setting aside so uncerimoniously the claims of Dr. Wells.

VII. We will now turn our attention to the proofs before us, which show that Dr. Morton was, from the first, distinctly apprised of Dr. Wells' experiments, and of their complete success; and that his proceedings in Boston, in the summer and fall of 1846, were instituted with the deliberate intent of *pirating* the discovery of another. Let us attend to the particulars:

1. It will be recollected that Mr. G. Q. Colton swears that soon after the extraction of the tooth of Dr. Wells, on the 11th of December, he "left the city of Hartford, and did not hear any more of the subject till he saw, a few weeks subsequent, a paragraph going the rounds of the newspapers announcing that Dr. Wells was extracting teeth without pain, and he stated on several occasions, in connexion with that paragraph, how and where the discovery originated." This paragraph may have been copied into the Boston newspapers; if so, it would pretty certainly have attracted the attention of Dr. Morton, as Dr. Wells had been his instructor and partner.

In addition, the greatest possible publicity was given to Dr. Wells' discovery at Hartford. All the witnesses swear that it attracted general attention, and was the subject of much conversation. Dr. Morton had resided several years at Farmington, only nine miles from Hartford, and married his wife in that vicinity. It will appear hereafter, by his own admissions, that he visited Hartford in the summer of 1845, and if we can rely on the statements of Dr. Wells, he did so on two occasions during that summer, and made particular inquiries on the subject of nitrous oxyd gas, its preparation, administration, and effects. These circumstances point strongly to the conclusion that Morton must have been apprised, long before September 30th, 1846, of the discovery of anæsthesia by Wells, and of his success in making it practical.

2. In the Boston Medical and Surgical Journal of June 18th, 1845, (vol. 32, No. 20, p. 389,) is to be found an article, entitled, "Dr. Ellsworth on the modus operandi of Medicine." It is from the pen of P. W. Ellsworth, M. D., of Hartford, whose testimony has been so often quoted. At p. 396 of that article, may be found the following paragraph:

"Illustrative of the effect of spirit in preventing pain, is the following case: Having occasion to remove nearly all of the

upper lip for a cancerous disease from an intemperate man, I found him well prepared for the occasion, having fortified himself with an extra glass or two. No marble could have been more passive during the incisions; not a muscle moved, nor did a sigh escape him. Yet he was not intoxicated, but his nervous system was too much excited to feel as keenly as when in perfect sobriety. He only wondered, as it hurt so little, he had never had it done before. *The nitrous oxyd gas has been used in quite a number of cases by our dentists, during the extraction of teeth, and has been found, by its excitement, perfectly to destroy pain. The patients appear very merry during the operation, and no unpleasant effects follow.*"

Dr. Ellsworth says in his deposition, that "by this language I referred to the discovery of Dr. Wells, and to that only—to his practice and that of those associated with him." Here we find the great discovery distinctly announced in the leading Medical and Surgical Journal of the country, published too in the city of Boston, more than fifteen months before the pretended discovery of Morton. All of the elements of the case are stated. Not only were the public told that the nitrous oxyd gas had been used in quite a number of cases by the dentists of Hartford during the extraction of teeth, but that it had "*been found by its excitement perfectly to destroy pain*," and then the important fact is added that "no unpleasant effects follow." Here is anæsthesia fully developed and written down long before any controversy had arisen, and when there was no motive for coloring the matter or misstating the facts. There is not the slightest probability that such an annunciation would escape the notice of Dr. Morton, as he was a dentist, and had moreover long resided in the immediate vicinity of Hartford, and was well acquainted, not only with Dr. Ellsworth, but with the dentists residing there.

But this publication reaches far beyond the question whether Dr. Morton had knowledge of the experiments of Dr. Wells at and before his supposed discovery of September 30th, 1846. It goes powerfully to confirm and establish the statements of the witnesses who have appeared in support of the pretentions of Dr. Wells. A printed record of facts such as this has ever had great weight with the learned world in settling a question of priority of discovery, and it seems, according to the subjoined extract from a letter from the celebrated dentist, C. S. Brewster, to Dr. Wells, dated at Paris, May 14th, 1847, that such record has there much greater authority than depositions: "It is that printed number of the Boston Medical and Surgical Journal that I want, then there will be 'two years' proof in advance of all your competitors; so you *must* send me some copies of it. Here in France *sworn* testimony is not so good as a newspaper or journal printed. 'Tis useless to reason against it, for such is the fact, and we can't change the country."

3. The proof is full and conclusive that Dr. Wells went to Boston in January, 1845, to make known his discovery to the

faculty there, with a view to its introduction into general dental and surgical practice. He did make it known to Professor Warren; he went before the medical class, made the requisite explanations, and performed an experiment in their presence, by the extraction of a tooth while the party was under the influence of the nitrous oxyd. This will appear from the following depositions:

Deposition of P. B. Mignault, M. D., of Boston, Massachusetts.

"Boston, *March 3d*, 1847.

"I, the undersigned, resident of Boston, Massachusetts, testify that in the fall of the year 1844, while attending medical lectures given by Dr. John C. Warren, of the "Massachusetts General Hospital," the students were informed by Dr. Warren, at the close of his lecture, that Mr. Wells, of Connecticut, was present and would address them upon the subject of rendering the system insensible to pain during the performance of surgical operations, by the inhalation of exhilarating gas. The students accordingly retired to an adjoining room, where we were addressed upon this subject by Mr. Horace Wells, of Hartford, Connecticut, who invited us to meet in the evening to witness an operation, which operation was performed in our presence while the patient was under the influence of the gas.

"P. B. MIGNAULT, M. D., *Boston.*"

Sworn before

JOSIAH QUINCY, *Mayor and J. P.*

There is a deposition before the committee by Thomas G. W. Kennedy, M. D., of Boston, in precise coincidence with that of Dr. Mignault, but it is unnecessary to recite it at length.

Extract from a deposition of C. A. Taft, M. D., of Hartford, Connecticut.

"I knew the late Dr. Horace Wells, dentist, of Hartford. I think I first met and knew Dr. Wells when he came to Boston in January, A. D. 1845, for the purpose of making known his discovery of an anæsthetic agent to the Medical Faculty of that city. I was at that time a member of the Medical class of Harvard University."

"Dr. Wells was introduced to our class by Dr. John Warren, then Professor of Anatomy at the University. Dr. Wells then made a statement of his discovery, spoke of its importance, and his hopes of introducing it, the anæsthetic agent, into general use in surgical operations."

"On the same or the following evening Dr. Wells proceeded to administer the nitrous oxyd gas to several of the students and spectators present. At this time Dr. Wells extracted a tooth for some one under the influence of the gas. The patient hollowed somewhat during the operation, but on his return to consciousness said he felt no pain whatever. I took the gas with others at that time, and while under its influence I was entirely unconscious. Others to whom the gas was administered made the same declaration. The gas was administered and inhaled from a mouth-piece attached to a bag."

"I regarded the operation at Boston, above described, as successful, and as proving the truth of Dr. Wells' theory. For although the patient made some noise—a phenomenon constantly witnessed in the use of any anæsthetic agent—he nevertheless said he felt no pain."

"Boston, *March* 23, 1847.

"I hereby certify that the following gentlemen attended my lectures on anatomy and surgery, in the season of 1844–'45, viz: Thomas William Kennedy, Pierre Bazille Mignault, Cincinnatus Antony Taft.

"JOHN C. WARREN,
"*Professor of Anatomy and Surgery.*"

Deposition of Daniel T. Curtis, of Boston, Massachusetts.

"Boston, *March* 23, 1847.

"I hereby testify that Horace Wells, of Hartford, Connecticut, with whom I have been acquainted for several years, came to Boston in the year 1844, I think in November or December, and informed me that he had made a valuable discovery which enabled him and others to perform surgical operations without pain. He then informed me of the result of his experiments, which he assured me were numerous and perfectly successful. I accompanied him to a hall in Washington street, where a large number of medical students had assembled, as I understood, to witness an operation, to be performed by Dr. H. Wells, upon a patient while under the influence of exhiliarating gas, which was the discovery above referred to. The gas was administered and the tooth extracted under its influence by the said Wells in presence of myself and many others. I am not able to say whether the patient experienced any pain or not. There was certainly no manifestation of it. Yet some persons expressed themselves in the belief that it was an imposition.

"I was subsequently informed that his operations in Hartford prior to 1845 were uniformly successful under the influence of gas.

DANIEL T. CURTIS,
"*No.* 23 *Bedford Street.*"

Sworn before

JOSIAH QUINCY, *Mayor and N. P.*

But Dr. Wells not only announced his discovery at Boston to Professor Warren and his medical class, but spoke to all his acquaintances on the subject. He gave it all possible publicity, as witness the following:

Deposition of Abel Ball, Dentist, of Boston, Massachusetts.

"I, Abel Ball, of Boston, in the State of Massachusetts, having been duly cautioned and sworn, depose and say, That I am a physician and surgeon dentist, but I have practiced dentistry exclusively for the last fifteen or eighteen years. In the year 1840 I opened an office in this city where I have ever since resided in the practice of my profession. I knew the late Dr. Horace Wells, of Hartford, Connecticut, and in early life we were very intimate, being members of the same academy in Amherst, in this State. I always regarded Dr. Wells as a man of uncommon talent. He was very enthusiastic, possessed a philosophic and inventive mind, was very conscientious, and his character was without a blemish as far as I know.

"In 1845 Dr. Wells called at my office and informed me that he had made "an important and valuable discovery." He stated he had discovered that by the inhalation of nitrous oxyd gas, pain could be entirely prevented during dental and surgical operations, and added that he had come to this city for the purpose of introducing his discovery to the notice of the medical faculty and the public generally here. And I believe this to have been his only object in coming to Boston at that time.

"He said he had tried the anæsthetic properties of this agent upon himself, and had extracted many teeth in Hartford for persons under the influence of this agent. All of whom declared they felt no pain whatever during the operation.

"He was very sanguine and enthusiastic respecting his discovery. He said he had taken a room nearly opposite the Tremont House, where he had advertised that he would extract teeth without pain, and requested me to bring any patient of mine who desired to test the efficacy of this agent to his office and he would extract their teeth without charge. He also informed me that he had invited the medical faculty and Dr. J. C. Warren and his medical class to attend a lecture he designed giving upon this subject. Dr. Wells suggested to me, and I think also to my partner Dr. Fitch, the idea of using this agent in my practice. But at that time we were very busy indeed, and had no time to make the necessary arrangements for preparing and administering the gas to our patients. Dr. Wells remained in this city a few weeks, but I was unable to call at his office to witness any experiments by him with the class. I often heard during the years 1845 and 1846 that Dr. Wells was using the anæsthetic agent discovered and introduced by him with entire success.

"Prior to Dr. Wells' announcement to me of his discovery, I had never heard of the use or discovery of any anæsthetic agent what-

ever, nor did I ever hear that any one except Dr. Wells claimed to have made such a discovery till the latter part of the year 1846. And I further say that I verily believe Dr. Wells to have been the first to discover the fact that by the use of some agent the human system could be rendered insensible to pain during dental or surgical operations. I saw Dr. Wells several times after January, 1845, and I know that he never abandoned his claim to this discovery. Shortly before he left for Europe he called on me and stated that he was going to Paris to establish his claim as such discoverer before the medical faculty there. After his return from Paris he called on me again and spoke of his success in establishing his claim.

"ABEL BALL."

Sworn before

CHARLES MAYO, *J. P.*

December 11, 1852.

It would seem from the above deposition that the discovery of Dr. Wells obtained some notoriety in Boston even long prior to the date of Morton's supposed discovery. Dr. Ball says: "I often heard during the years 1845 and 1846 that Dr. Wells was using the anæsthetic agent discovered and introduced by him with entire success." Must not Dr. Morton have herad of the same thing? Were there not many circumstances existing in his case to awaken his attention which did not exist in that of Dr. Ball?

4. Dr. Morton, in his memoir to the French Academy, admits that he was present and witnessed the experiment before Dr. Warren's class. His statement is as follows:

"In the course of the winter (1844–5) Dr. Horace Wells, of Hartford, Conn., a dentist, and formerly my partner, came to Boston, and desired me to aid him in procuring an opportunity to administer the nitrous oxyd gas, which he said he believed would destroy or greatly alleviate pain under surgical operations. I readily consented, and introduced him to Dr. George Hayward, an eminent surgeon, who offered to permit the experiment, but as the earliest operation was not to be performed under two or three days, we did not wait for it, but went to Dr. Warren, whom we found engaged with his class. He told us that his students were preparing to inhale it that evening, for sport, and offered to announce the proposal to them, and ask them to meet us at the college. In the evening Dr. Wells and myself went to the hall, and I took my instruments. Dr. Wells administered the gas, and extracted a tooth, but the patient screamed from pain, and the spectators laughed and hissed. The meeting broke up, and we were looked upon as having made ourselves very ridiculous. I saw nothing more of Dr. Wells, but he left my instruments at my office very early the next morning, and went directly home."

This memoir is quoted at length by the committee of the House of the last session in their report, (so called,) commencing at p. 8. The above paragraph may be found at pp. 10 and 11. Dr. Wells himself did not regard the experiment as fully successful, and Dr. Morton is no doubt right in saying that his pretensions were treated with ridicule and contempt. No doubt the feelings of Dr. Wells were much wounded; he returned to Hartford greatly depressed, being, as one of the witnesses has said, "the most sensitive of men." But Dr. Morton knew Dr. Wells intimately—he had been not only his pupil, but his partner, and understood perfectly the sincerity and integrity of his character. That Dr. Morton was convinced that there was a great deal more in Dr. Wells' discovery than the learned Doctors of Boston and their pupils were prepared to admit, will appear from the following testimony:

Deposition of Joseph S. Walton, of Sherbrook, Lower Canada.

"SHERBROOK, LOWER CANADA, *December* 27, 1852.

"This certifies that in the month of January, 1845, I was in the city of Boston, Massachusetts, and, having occasion to call at the office of Dr. Morton, dentist, I learned that Dr. Wells, a former partner of Dr. Morton, claimed to have discovered a method of extracting teeth without any pain to the patient, and had proposed to perform the operation in public, provided he could procure subjects to operate upon. It is my impression that he inserted a notice to that effect in the *Evening Transcript*, requesting any persons who might be willing to submit to the operation to call upon him, or at the office of Dr. M. I subsequently learned from Dr. Morton that no public experiment took place, as I understood, for the want of patients, or for the want of an audience. Dr. Morton discredited the discovery, or pretensions of Dr. Wells. The letter over my signature in the Hartford *Courant*, and copied into the Boston *Courier*, was written by me, and the statements therein contained are true, to the best of my knowledge and belief.

"JOSEPH. S. WALTON."

Sworn before me, at Sherbrook, L. C., this 27th day of December, 1852.

JOHN GRIFFITH,
Justice of the Peace.

Deposition of Esther W. Walton, of Sherbrook, Lower Canada.

"HARTFORD, *November* 6, 1852.

"I, Esther W. Walton, of Sherbrook, Canada East, of lawful age, having been duly cautioned and sworn, depose and say: During a dental operation which was being performed in Dr. Morton's office, at Boston, in the month of January, 1845, I was within hearing of a conversation which took place between Dr. Wells and Dr. Morton, relative to the discovery of an agent by Dr.

Wells, whereby he had been, and was, enabled to extract teeth without occasioning pain. This discovery Dr. Wells communicated to Dr. Morton at this interview. In the early part of the conversation, the precise words of which I cannot recall, Dr. Morton made light of it, treating the subject as chimerical. This incredulity on the part of Dr. Morton seemed to touch the feelings of Dr. Wells, and induced him to remark, "I *have* done it, and *can* do it again." He stated, moreover, that it was his intention to deliver a public lecture, where he should make the experiment, provided he could find a willing subject for this purpose. The remainder of the conversation, being carried on in a lower tone of voice, I did not hear distinctly. My impression has always been, since that time, that no such lecture was given, and that Dr. Morton, after further conversation with Dr. Wells, began to apprehend the discovery might be valid and prove useful, and for some reason induced him to forego the lecture for that time. This feeling I have expressed to my husband more than once, but have heretofore felt reluctant to bear public testimony to these facts, on account of the circumstances connected with my obtaining a knowledge of them. Becoming convinced, however, that it is an act of justice to make them known, I write this document voluntarily, and witness to its truth.

"ESTHER W. WALTON."

Sworn to at Hartford, Connecticut, before
H. K. WELCH, *N. P.*

"Sherbrook, Lower Canada, *May* 21, 1852.

"We, the undersigned, have for many years been acquainted with Joseph S. Walton, Esq., of this place, and know him to be an estimable citizen and a gentleman of undoubted veracity, whose assertions upon any subject, either under or without the sanction of an oath, may be relied upon with implicit confidence.

J. S. SANBORN,
Member Parliament.

S. T. BROOKS, *M. D.*
WM. RITCHIE,
Register of Deeds, Sherbrook county, Canada East.

G. F. BOWNE,
Sheriff.

E. CLARK,
High Constable District St. Francis.

Though Mr. and Mrs. Walton may be mistaken in some of the incidents adverted to, yet the general truthfulness of the narration cannot be doubted by any one. How vividly did the great leading attribute of Dr. Wells' character shine out when Morton expressed incredulity as to the genuineness of his discovery. "I

have done it," exclaimed Dr. Wells, "and can do it again!" No doubt Mrs. Walton is right in her conjecture as to the purport of the latter part of the conversation. "My impression," she says, "has always been that" * * * "Dr. Morton, after further conversation with Dr. Wells, began to apprehend the discovery might be valid, and prove useful." At any rate, he was unquestionably fully informed by Dr. Wells on the subject. He, (Dr. W.) must have gone over all the details—the particulars of the first experiment on himself must have been stated, and the success of all the subsequent experiments revealed. It is not too much to believe this, in view of the intimate relations which had previously existed between them.

5. But Dr. Morton was fully informed at a subsequent period, and anterior to his experiment of September, 1846, of the discovery of Dr. Wells, as will appear by the following:

Extract from the deposition of Elizabeth Williams, of Hartford, Connecticut.

"Some time after this I saw Dr. W. T. G. Morton at Stafford Springs, and learning that he was a dentist, I spoke of my tooth, and mentioned the fact that Dr. Wells administered gas to me. I remarked to him I was among the first who took the gas. He asked about the effect and operation of the gas, and made no intimation of any acquaintance with or knowledge of the gas, or of any anæsthetic agent, and the conversation passed off by Dr. Morton's saying he had recently invented some frame work for teeth. According to the best of my remembrance and belief, I took the gas of Dr. Wells in the office of Dr. Riggs, on the 6th day of March, A. D. 1845, and I saw Dr. Morton at 'Stafford Springs,' and had the conversation above referred to, in the summer of 1846; it was certainly at no later date."

6. In the memoir already adverted to at p. 11, we find the following statement:

"In July, being again in Connecticut, I called on Dr. Wells, and we spent some time in adjusting our former partnership accounts. He had then given up dentistry, and was engaged in conducting an exhibition of birds, which he said insured him better health. *I went with him to the office of Dr. Riggs, where I spoke of the gas, and asked them to give me some, but Dr. Wells said he had abandoned the experiment, thinking it could have no practical value.*"

This remarkable statement calls for the following observations:

1. That Dr. Morton was in Hartford in July, 1845, when the discovery of Dr. Wells, and the success of the new practice, as conducted by him and his associates, had become notorious. All the witnesses say that it attracted much attention, and was the subject of general remark. He was then mingling with his pro-

fessional brethren, and could not fail to have learned from them all the particulars of such interesting developments. How naturally, nay, almost inevitably, would the enquiry have burst from his lips, *how does Dr. Wells get along with his gas?* He had previously, on occasion of Dr. Wells' visit to Boston, been well informed on the subject, and it is impossible to believe that he would visit Hartford without inquiring into the matter, and if he did inquire, we know from the proofs adduced what answer he must have received.

2. But we have in the statement of Dr. Morton himself, sufficient proof that he had at that time some just notions of the value of the nitrous oxyd as an anæsthetic agent. He says, "I went with him to the office of Dr. Riggs, where I spoke of the gas, and asked them to give me some." Then it would seem that Morton had an idea that the gas was valuable, for otherwise why ask for it! It is quite clear that he desired to obtain it to use professionally, or at least to experiment with it for his own satisfaction.

3. As, however, he was seeking to obtain a recognition of his claims as a discoverer by the French Academy, it was necessary to say something to take off the effect of this admission, and therefore he adds: "*but Dr. Wells gave me to understand that he had abandoned the experiment, thinking it could have no practical value.*" There is only one word in the English language which can adequately characterize this statement, and that is withheld from other motives than a sentiment of respect for Dr. Morton. No, Dr. Wells never gave him any such intimation. It would have been directly contrary to the whole tenor of his conduct—contrary to his uniform avowals of confidence in his agent, to the incessant manifestations of an all-absorbing enthusiasm, and to the unquenched zeal and unsurpassed vigor with which he persued his experiments, to say nothing of the brilliant success which marked their progress. Let any one take up and read the depositions of F. C. Goodrich, J. Gaylord Wells, and Norman W. Goodrich, and say whether it is possible that Dr. Wells could have given Morton "to understand that he had abandoned the experiment, thinking it of no practical value." The last clause of the statement must be rejected utterly, and then we have the real truth remaining. Morton in Hartford, surrounded with all the radiance of Dr. Wells' great discovery, speaking of the nitrous oxyd gas, and asking Wells and Riggs to give him some, &c. It is believed that there is not a man in Hartford, who, in 1845 and 1846, was better informed than was Wm. T. G. Morton on the experiments of Dr. Wells.

7. But we have further proof that Dr. Morton obtained his knowledge of anæsthesia from Dr. Wells in the following:

Deposition of Oswin R. Roberts, of Hartford, Connecticut.

"I, Oswin R. Roberts, of the city and county of Hartford, and State of Connecticut, of lawful age, testify and say, that I am a

looking-glass and picture frame maker, and am partner in said business with Samuel S. Bolles. I knew the late Dr. Horace Wells, of this city. He, Dr. Wells, went to Europe in December, 1846. One of his objects in going to Europe was to obtain pictures, but I do not know that that was the only one. He would not be likely to inform us respecting any objects or project except those particularly connected with our business.

"After Dr. Wells returned from Europe we prepared a number of frames for him.

"Two years or so before Dr. Wells went to Europe, I knew that exhibitions were given here of the laughing gas, and that Dr. Wells had the reputation of having successfully applied it to dental operations.

"At the time the operation was performed on Mrs. Gabriel, I resided in the adjoining part of the house, it being a double house. I saw the tumor after it was removed from her shoulder, and heard that it was removed without pain, but did not witness the operation.

"Dr. Wells was believed to be the originator of this application of gas, and had that reputation fully established, I think, nearly two years prior to said operation.

"I came to Hartford in June, 1845, and soon after my arrival I heard of Dr. Wells' discovery.

"Dr. W. T. G. Morton called at our office this winter, prior to January, 1853, and had a long conversation with us respecting the discovery of anæsthetic agents. He called to inquire about Wells' buying picture frames of us. Dr. Morton stated that he took his idea from Dr. Wells' use of nitrous oxyd gas, but that the gas failed, and he went on perfecting the discovery until it resulted in the use of sulphuric ether.

"I never heard Dr. Wells' claim disputed until Morton and Jackson, of Boston, put in theirs. My own belief is that to Dr. Wells alone belongs the honor.

"OSWIN R. ROBERTS."

HARTFORD, *January 12th*, 1853.

Sworn before H. L. RIDER, *N. P.*

Then it seems Dr. Morton *took his idea from Dr. Wells!* though it would have been better if he had said that he took anæsthesia fully developed and established from Dr. Wells. With respect to the addition "that the gas failed," we are fortunately at liberty to think of it as may be required by truth and justice. If Dr. Morton is as successful in his foray on the Treasury as the gas was in the hands of Dr. Wells, he is likely to be a very wealthy man.

It is submitted that all these proofs and considerations show conclusively that Morton ought to have been content to set at the feet of Horace Wells as a humble disciple, and should acknowledge that to him and him only is he indebted for all he ever

knew on the subject of anæsthesia. But whether Morton did or did not know of the discovery of Wells and his success, is immaterial—the question of priority must nevertheless be decided in favor of the latter. It is a settled rule among scientific men throughout the world, that the first who conceives and makes practical, important, or useful ideas, is to be regarded as the true discoverer, (without reference to the question whether the party who was second in point of time did or did not know of the proceedings of the first,) and that man in this case was Horace Wells, unless all testimony is to be deemed a lie, and we are to believe that there is neither honor, faith, rectitude, or truth among men.

VIII. But it is said that Dr. Morton's claims have been recognised in France, and a medal was at the last session produced and exhibited in the Senate chamber, as a recognition of his pretensions by the scientific magnates of Paris; but it turns out, on inquiry, that the award was in favor of Professor Jackson for the discovery of the principle, and of Dr. Morton for the application of that principle—being 2,500 francs to each, and that either party might take in part payment a medal, which Morton did. It was not struck expressly for him, but was the ordinary one of the Institte. But what has this to do with the pending controversy? The investigation in Paris concerned only the relative merits of Jackson and Morton. It was an *ex parte* hearing, as to Dr. Wells. The Institute knew nothing of his claims—he was not present, and had no opportunity to adduce his proofs. At a subsequent period, however, the case of Dr. Wells was brought before the "Parisian Medical Society," and was favorably entertained, as will appear by the subjoined letter, from C. B. Brewster, of Paris:

PARIS, *January* 12, 1848.

"MY DEAR WELLS: I have just returned from a meeting of the 'Parisian Medical Society,' where they have voted that 'to Horace Wells, of Hartford, United States of America, is due all the honors of having first discovered and successfully applied the uses of vapors or gases, whereby surgical operations could be performed without pain.'

"They have done even more, for they have elected you an honorary member of their Society.

"This was the third evening that the Society had deliberated upon the subject. On the two previous occasions Mr. Warren, the agent of Mr. Morton, was present, and endeavored to show that to his client were due the honors; but he, having completely failed, did not attend at the last meeting.

"The use of the ether took the place of the nitrous oxyd gas, but chloroform has supplanted both; yet the first person who first discovered and performed surgical operations without pain was Horace Wells, and to the last day of time must suffering humanity bless his name.

"Your diploma and the vote of the P. M. S. shall be forwarded to you. In the interim, you may use this letter as you please.

"Believe me ever truly yours,

"BREWSTER."

Dr. Wells perished in the city of New York, January 24, 1848, by his own hand, in a paroxysm of insanity, induced, as his friends believe, by the excitement and irritation of this controversy with Morton, and therefore did not live to receive the cheering news of the final recognition of his claims by the highest medical authority of Europe—a recognition which was the more valuable, as it was accorded after a full hearing of Dr. Morton by his counsel.

IX. Dr. Morton has discredited his pretensions by attempting to corrupt Dr. J. M. Riggs, and to buy off the opposition of Mrs. Wells. This is established by the following proofs:

Deposition of H. G. Prior, of Hartford, Connecticut.

"I, H. G. Prior, proprietor of the 'United States Hotel' in the city of Hartford, and partner of Harvey Rochwood, being of lawful age, present to Henry L. Rider, a Notary Public for the State of Connecticut, residing in said Hartford, the register of the 'United States Hotel.' It appears from this book, that Dr. Wm. T. G. Morton and Mr. N. C. Towle stopped at the hotel on several occasions. The first time they were together at the hotel appears to have been on the 29th day of September, 1852. Both seem to have come from the North together. Their names are registered together, Dr. Morton's being on the line next above N. C. Towle, of Washington. The second time was on the 7th of October, 1852, and their names are registered together in the same order. They came together, and appeared to be friends well acquainted with each other. Dr. Morton has stopped at this hotel on several other occasions, when Mr. Towle was absent. Dr. Morton told me that he 'sent Towle fifty dollars to pay their bills with,' and they were both paid by Mr. Towle. Morton also told me that 'Mr. Towle was assisting' him 'in collecting evidence on the gas and ether business.' 'I,' Morton, 'agreed to pay his expenses.' And further this deponent saith not.

"H. G. PRIOR."

Sworn before H. L. RIDER, *N. P.*

Extract from the deposition of John M. Riggs, of Hartford, Connecticut.

"I know N. C. Towle, of Washington; he was introduced to me by Mr. J. Dean Alden, of Hartford. Mr. Alden called on me two or three times about the first of October, 1852; and once

wrote me a note, requesting an interview at the court house in this city. The object of the visit was to impress upon me the fact that a hundred thousand dollars had been voted to Morton for his discovery, that wanted only the President's action, and thought that I ought to make a good sum of money out of it. At the second visit he said, 'you ought to make ten thousand dollars out of it, and you will.' I was after this introduced to Towle by Alden, at which interview Towle said he had just left Morton at Springfield, who had sent some documents and papers by him (Towle) to Hartford. I gave N. C. Towle, at this interview, a full description of Wells' discovery, and he said, in reply, it was impossible for any one to get anything while Mrs. Wells maintained her claim; that Congress would not make an appropriation; and that the only way was, for all the claimants to unite, and allow Morton to receive the money and divide it up among them. He wanted my influence with Mrs. Wells, that she might acceed to this plan. He assured me the propositions made to me would be perfected, on condition our opposition was withdrawn. I replied, it depended on Mrs. Wells; if she maintained her claim, she must have the benefit of my testimony—if she chose to withdraw, it was no business of mine, and she could do as she pleased. I did see Mrs. Wells, and made known to her Towle's proposition; she replied, "It is not money I want, but the rights and reputation of my husband."

The facts proved establish, conclusively, that both Alden and Towle were acting under the authority and by the direction of Morton. According to the testimony of Mr. Prior, Towle came to Hartford, on two occasions last fall, in company with Morton. They put up at the same hotel, (the United States,) and their names, on both occasions, were entered on its register in connexion with each other. "They came together," says Mr. Prior, "and seemed to be friends, and acquainted with each other." And besides, Mr. Prior adds, "Dr. Morton told me that he sent Towle fifty dollars to pay his bills with, and they were both paid by Towle. Morton also told me that Mr. Towle was assisting him in collecting evidence on the gas and ether business, and that he agreed to pay his expenses." This makes Towle unquestionably the agent of Morton in addressing Dr. Riggs, and making, through Riggs, the proposition to Mrs. Wells, which he (R.) has sworn to. And it is quite as certain that Mr. J. Dean Alden was acting by the same authority when he made a corrupt intimation to Dr. Riggs. It is not at all probable that he was a volunteer in this piece of iniquity. Besides, he was the very man who introduced Towle to Dr. Riggs, and by that act alone established the intimacy of his relations with Morton and Towle. And, then, what are we to think of such conduct. We have here an attempt to deprive Mrs. Wells of the invaluable testimony of Dr. Riggs, by the profligate suggestion, in the first instance, that he ought to make a good sum of money; and, in

the second, ten thousand dollars out of the claim of Morton. But the integrity of Dr. Riggs being made of stuff by far too stern to yield to such seductions, it became necessary to experiment on Mrs. Wells, and accordingly a message was sent to that lady by Dr. Riggs, asking her to withdraw her opposition for "*a good and valuable consideration.*" But what was the reply of that noble woman, "IT IS NOT MONEY I WANT, BUT THE RIGHTS AND REPUTATION OF MY HUSBAND!" Can there be any validity in claims attempted to be sustained by such base means?

X. It now becomes necessary to take some notice of a correspondence between Dr. Morton and Dr. Wells in October, 1847, on the subject of this discovery, on which reliance is placed as showing the invalidity of the claims of Dr. Wells.

On the 19th of said October, Dr. Morton addresses Dr. Wells, as follows: "I have discovered *a preparation*, by inhaling which a person is thrown into a sound sleep; *the time in which persons remain asleep can be regulated at pleasure.* While in this sleep the severest surgical and dental operations may be performed, the patient not experiencing the slightest pain. I *have patented* it, and am now sending out agents to dispose of the right to use it. I have used this *compound* without a single failure in over one hundred and sixty cases in extracting teeth. My object in writing you is to know if you would not like to visit New York, and dispose of rights."

Dr. Morton produced before the select committee of the House at the last session, what purported to be the reply of Dr. Wells to this letter. Such a reply appears in the report of the majority of that committee, at page 74; but the friends of Mrs. Wells and son were not able to obtain an inspection of it at that session, though it was much sought, and no such reply has been produced to the select committee of the Senate up to this date, (Feb. 12.) It is impossible, therefore, to say whether Dr. Morton has such a reply in the genuine handwriting of Dr. Wells—it may be so; as printed, it is as follows:

"HARTFORD, CONNECTICUT, *October* 20, 1846.

"DR. MORTON—*Dear Sir:* Your letter dated yesterday, is just received, and I hasten to answer it, for fear you will adopt a method in disposing of your rights, which will defeat your object. Before you make any arrangements whatever, I wish to see you. I think I will be in Boston the first of next week—probably Monday night. If the operation of administering the gas is not attended with too much trouble, and will produce the effect you state, it will, undoubtedly, be a fortune to you, provided it is rightly managed.

"Yours, in haste, H. WELLS."

Let any candid man consider whether any inference can be fairly drawn from this answer, adverse to the pretensions of Dr.

Wells. Will it do to conclude on such slender grounds, that all the vast testimony, hereinbefore adduced, is false and unfounded; that Dr. Wells did not inhale the nitrous oxyd on the 11th of December, 1844, and have a tooth extracted without pain; that Mr. F. C. Goodrich did not soon after submit to the same experiment, and with the same result; that Mr. J. G. Wells did not have five teeth out by the use of the gas, and one by ether, and a multitude of other persons also have teeth extracted, and without pain. Have all the witnesses who have said that Dr. Wells had the highest confidence in the nitrous oxyd, and pursued the new art with the utmost enthusiasm, sworn false; and are distinguished members of the legal medical and dental professions, learned professors, grave and dignified clergymen, and citizens of the first respectability, all to be written down perjured knaves, on a quibling construction of this letter, which fairly interpreted and properly understood, does not interfere in the slightest degree with the claims of Dr. Wells.

Consider for a moment the situation of Dr. Wells. He had told Morton in January, 1845, at Boston, all about his discovery, and probably had conversed with him fully on the subject at other times, particularly when Morton visited Hartford. He (M.) had been his pupil and partner, and Wells doubtless regarded him as a friend. Could he have suspected that Morton had conceived the base design of laying hold of one of his old agents and of so using it as to supercede him in the discovery. The only inference which Wells would have drawn from such a letter, was that Morton had discovered a new and a different agent—one quite unlike his own, for it was a compound, and that it could be more conveniently used, and would produce a better effect than either the gas or ether. But this remarkable and truly characteristic letter must be analyzed in order to exhibit it in its true light.

1. In the first instance he calls the agent "a *preparation*," and finally "*a compound*," and thus uses language adapted to create a false impression on the mind of Dr. Wells. How could he (Dr. W.) infer from such terms that Morton was using sulphuric ether. It is believed to be in no sense a compound, and certainly is not so in the ordinary sense of that word. Dr. Morton should have recollected, that to use language purposely so as to create a false impression, is in law and ethics a falsehood.

2. He says to Dr. Wells, that not only can he, by the use of his agent, throw a person into a sound sleep, but the time of that sleep "*can be regulated at pleasure*." Now this is not true of ether or nitrous oxyd gas, nor in fact of any other anæsthetic agent now know. It is true you can regulate the quantity, but its effect in point of time depends so much on constitution and temperament as to make it impossible to regulate it. Dr. M. must have known that the statement was wholly groundless, and yet consider how well adapted it was to mislead Dr.

Wells, and induce the belief that he (M.) had hit on some thing entirely new.

3. "I have used this compound," he says, "*in over one hundred and sixty cases in extracting teeth.*" He made his discovery, it will be recollected, on the 30th of September, then extracting the tooth of Frost without pain; and then, according to this statement, he had had in twenty short days wonderful success! No less than one hundred and sixty teeth out in that period by the use of his compound, "without a single failure." This was no less than eight operations per day, including Sabbaths, verily! this was beating poor Wells all hollow! But unfortunately for Dr. Morton, he has given in writing an account of his operations during those twenty days. It may be found in his memoir to the French academy as it appears on the Report of the Committee of the House, pages 14, 15.

He says immediately after his first experiment he called on Dr. Warren, who promised him an early opportunity to try the the experiment. He then proceeds as follows:

"In the meantime, I made several additional experiments in my office, with various success. I administered it to a boy, but it produced no other effect than sickness, with vomiting, and the boy was taken home in a coach, and pronounced by a physician to be poisoned. His friends were excited, and threatened proceedings against me. * * * * * I gave it to a lady, but it produced no other effect than drowsiness, and when breathed through the apparatus named by Dr. Jackson, it produced suffocation. I was obliged to abandon this mode, and obtaining from Mr. Wightman a conical glass tube, I inserted a saturated sponge in the larger end, and she breathed through that. In this way she seemed to be in an unnatural state, but continued talking, and refused to have the tooth extracted. I made her some trifling offer, to which she assented, and I drew the tooth, without any indication of pain on her part, not a muscle moving. Her pulse was at 90, her face much flushed, and after coming to, she remained a long time excessively drowsy. From this experiment, I became satisfied of what is now well proved, that consciousness will sometimes remain after insensibility to pain is removed.

"I afterwards gave it to a Miss L., a lady of about twenty-five. The effect upon her was rather alarming. She sprang up from the chair, leaped into the air, screamed, and was held down with difficulty. When she came to, she was unconscious of what had passed, but was willing to have it administered again, which I did with perfect success, extracting two molar teeth. After this, I tried several other experiments, some with more and some with less success, giving my principal attention to the perfecting of my modes of administering it."

On the 16th of October Dr. Morton made his first experiment at the hospital, in conformity with the arrangement which he had

made with Professor Warren, and on the 17th he was favored with an opportunity to make another experiment, both in cases of surgery.

But what does he say about teeth extracted between September 30th and October 16th. The case of the boy was unsuccessful, and this would seem to interfere a little with his allegation to Dr. Wells, that he had used his compound in one hundred and sixty cases *without a single failure.* The other two cases would seem to have a rather ugly look, and would hardly justify the extravagance of laudation which he bestows on his compound. What the other experiments were, mentioned in general terms, we do not know, but it will be difficult to *extract* from the passage referred, teeth enough to make up one hundred and sixty, all taken out with "the compound without a single failure." Probably he did not do much after operating on the boy and the two ladies in the line of tooth pulling, as he says he directed his "principal attention to the perfecting of his modes of administering the gas." We are then brought down to the 16th of October, with three cases of dentistry, or rather four, (for the case of Eben Frost should in fairness be included;) on the 16th Morton was employed at the hospital; do. on the 17th, and this will leave only one day to make up over one hundred and sixty cases of the extraction of teeth, using the compound "without a single failure," for he wrote his letter to Dr. Wells on the 19th. Nothing further need be said to satisfy the reader that this allegation was truly *Mortonian.*

4. But there are other statements of the same character in this letter. After having spoken of his preparation and described its wonderful powers, he adds: "*I have patented it, and am now sending agents to dispose of the right to use it.*" Now the records of the Patent Office prove that this was an impudent falsehood. He had not patented it. He and Jackson united in an application which is dated on the 27th of October, and the patent (issued to Morton alone by assignment of Jackson) bears date on the 12th of November. Dr. Morton did not even know whether he could get a patent or not. It will be insisted hereafter that this great discovery, by whoever made, is not patentable, and that the letters granted to Morton were issued improvidently—that those letters are null and void. And yet he had the audacity to write to Dr. Wells that he had already obtained a patent—nay, more, that he was actually sending out agents to dispose of the rights. He practiced an abominable imposition on Dr. Wells, and by falsehood and fraud drew from him the letter of October 20th. What did Dr. Wells do? Let his estimable widow tell the story:

Extract from the deposition of Mrs. Elizabeth Wells.

"In the fall of 1846, my husband received a letter from Dr. Wm. T. G. Morton, of Boston, informing him that he had dis-

covered some preparation or compound that would produce insensibility to pain, and which he had patented, and proposed that my husband should undertake a sale of the rights, to which letter my husband replied. Shortly after my husband concluded to go to Boston, with a view to ascertain what Dr. Morton had discovered, and invited me to accompany him. This was, if I mistake not, on Saturday. We left home in the early morning train, and arrived in Boston in time to take dinner with the family where we stopped. Immediately after dinner my husband went out to see Dr. Morton, and returned after an absence of about two hours. On his entering the room I asked him whether Morton had discovered anything new. He replied "No," it is my old discovery, "and he does not know how to use it." He added that he perceived what it was immediately on entering Dr. Morton's room, from the atmosphere; he said it was nothing but ether. I asked my husband whether he intended to assist Dr. Morton in selling his patent rights. He replied no, he would have nothing to do with him. We spent the Sabbath in Boston, and took the morning train for Hartford on Monday following."

5. But we have not yet done with Wm. T. G. Morton, in the matter of his letter of October 19th. The original having been transmitted to Dr. Wells, would of course remain in his hands; but it seems Dr. Morton kept a copy, for he produced to the Committee of the House at the last session what purported to be a copy, inserted in their report at page 74, in which he has taken care to substitute for the words "patented it," the words "perfected it," apparently with a view to escape the dilemma in which he had involved himself by the falsehood of the first allegation. Dr. Wells had called him to order for practicing on him such an imposition, in an article published in the Boston Medical and Surgical Journal, of May 12th, 1847. "On receiving the above letter," he says, "I went to Boston to learn the nature of this improvement on my discovery; I there saw Dr. Morton administer his (so-called) 'compound,' and the patient, instead of going quietly to sleep, to be aroused at pleasure, as I had been informed would be the case, became exhilarated, succeeded by a stupor, the same as is produced by the inhalation of nitrous oxyd gas. While at Dr. Morton's, three or four other patients inhaled the 'compound,' two of whom informed me it was an entire failure. I thought this remarkable, after his operating on one hundred and sixty patients "without a single failure." I then inquired about the patent which the letter stated had been obtained for the compound, and learned to my surprise that he had not obtained one." In the book which he has caused to be printed at this session, he reproduces, at page 14, the same pretended copy, holding on to the word "perfected," in place of "patented," as it was in the original, but it is a very bungling alteration, for the residue of the sentence shows conclusively, that the word in fact used, must have been "patented." It is a pity that a man detected in a

falsehood should, in order to screen himself, make an alteration in a paper, which, after all, does him no good.

6. The picture has already so many dark shades that it is with infinite regret we feel constrained to add another. Mr. Joseph Wales, formerly of Hartford, Connecticut, but at present of the city of New York, the brother of Mrs. Wells, swears (vide his deposition on file) that some time during the last session he transmitted to Washington, in behalf of Mrs. Wells, a bundle of papers, including Dr. Morton's original letter, to be laid before the Committee of the House, and that the letter hereinbefore recited, dated October 19, and signed Wm. T. G. Morton is a true copy of the original, and that when the bundle was returned to him at the close of the session the original was missing. It appears from the certificate of Mr. Smith, of the Senate, and Mr. Stanly, of the House, that all the papers received from Mr. Wales were transmitted to the Committee and were by them referred to Mr. Sutherland, and also from the certificates of Mr. Ingersoll and Mr. Chapman, both of the House, that all the papers received back from the Committee were returned to Mr. Wales. The Hon. Mr. Sutherland has given us the following statement:

"The Wells papers above referred to were handed to me by some member of the Committee after a reference by the Committee of the claim of Mrs. Wells to me. I examined them and made out a short statement or report in relation to them, and my impression is that soon afterwards Dr. Morton asked me for them for the purpose of giving them to Mr. Rantoul, who was drawing the report of the majority of that Committee, and that thereupon I did hand the Wells papers, together with my report or statement to him, to be delivered by him to Mr. Rantoul.

"JOSEPH SUTHERLAND."

It is a little singular that the paper which was calculated to damage the reputation of Dr. Morton more than any other should have so mysteriously disappeared. What inference should be drawn from the premises the candid must judge.

What, then, is the conclusion of the whole matter? It is that Dr. Morton, under date of October 19, wrote to Dr. Wells a letter, which was a tissue of misrepresentations from beginning to end, and induced him to believe that he had discovered and introduced some new and much more useful agent than his own for which he had secured a patent—or, in other words, that he had made a great improvement on his discovery; and under this false impression he penned the letter of October 20. He did not dream that he was using one of his (Wells') old agents. But he was soon to be undeceived, for he started the next day for Boston, and what the result of his interview with Morton was, we learn from the statements of Mrs. Wells: "I asked him," she says, "whether Morton had discovered anything new." He replied "No! it is my old discovery, and he does not know how to use it." In place of producing this letter against the claims of Dr. Wells,

he ought to make some reparation to his destitute family for the trouble and expense of that useless journey to Boston.

But the committee of the House cite, in connexion with the letter of Dr. Wells of October 20, a letter of R. H. Eddy, dated February 17, 1847, who seems to have been Morton's lawyer, in which he says that he was present at the interview between Wells and Morton at the office of the latter, in Boston, and then he adds, "during the meeting we conversed freely on the discovery and in relation to the experiments Dr. Wells had been witness to in the office of Dr. Morton. The details of the conversation I do not recollect sufficiently to attempt to relate them, but the whole of it and the manner of Dr. Wells at the time, led me in no respect to any suspicion that he (Dr. Wells) had ever before been aware of the then discovered effect of ether in annulling pain during a surgical operation." Without dwelling on the fact that this is a statement not under oath, and therefore no evidence in the present controversy, it is sufficient to say that it is altogether too loose to be of any value. It is true the agent mainly relied on by Dr. Wells was nitrous oxyd gas, but can statements such as those of Mr. Eddy, which were little above conjecture, overrule and put down the explicit proof now before the committee, that Dr. W. and his friends at Hartford ascertained the anæsthetic effect of sulphuric ether in the winter of 1844–'45.

But it is certain Dr. Wells did not find out, until long after the interview at Boston, that it was the purpose of Morton to supersede him as the discoverer of anæsthesia—he supposed that he claimed only the discovery and application of another and more convenient agent, if not a better one in all respects.

Extract from the deposition of John M. Riggs, of Hartford, Connecticut.

"When Dr. Morton first came out with his claim for ether, Dr. Wells supposed that he (Dr. Morton) did not propose to controvert his (Dr. Wells') pretensions as the discoverer of an anæsthetic agent, but merely that he had discovered some other agent that might be more conveniently used. But when Dr. Wells found that the fact was otherwise, he was greatly disturbed, and I think his health was injuriously affected by the controversy."

There is, therefore, nothing in the letter of Dr. Wells, of October 20, nor in what transpired at his interview with Morton, that militates against his claims; and yet, on such an adequate foundation, the committee of the House felt themselves authorized to declare that Dr. Wells did not "originally claim for himself the honor of the discovery, but merely of the attempt, which he admitted to have been fruitless." Most unfortunate conclusion! Setting aside a mass of testimony such as has seldom been adduced before on a question of discovery, and committing a multitude of witnesses of the first respectability to infamy, as perjured knaves!

Dr. Morton having utterly failed to make anything out of the letter of Dr. Wells, of October 20, to the prejudice of his claims, in the next place endeavored to strip him of all merit in respect to this great discovery by the allegation that one Samuel Cooley of Hartford, suggested to him in the first instance the idea of anæsthesia, and he relies on a deposition which Cooley volunteered to send to Washington at the last session to be laid before Congress. The following extract from that deposition will present all that is material to the point under consideration.

"That one G. Q. Colton gave a public exhibition in the Union Hall in the said city of Hartford, to show the effect produced upon the human system by the inhaling of nitrous oxyd gas: and, in accordance with the request of several gentlemen, Mr. Colton did give a private exhibition on the morning of December 11th, 1844, at the said hall; and that the deponent then inhaled a portion of said nitrous oxyd gas, to ascertain its peculiar effect upon his system; and that there were present, at that time, the said Colton, Horace Wells, C. F. Colton, Benjamin Moulton, and several other gentlemen, to the deponent at this time unknown; and that the said deponent, while under the influence of said gas, did run against and throw down several of the settees in said Hall, thereby throwing himself down, and causing several severe bruises upon his knees, and other parts of his person; and that after the peculiar influence of said gas had subsided, his friends then present asked if he had not injured himself, and then directed his attention to the acts which he had committed unconsciously while under the operation of said gas. He then found by examination that his knees were severely injured; and he then exposed his knees to those present and found that the skin was severely abraded and broken; and that the deponent then remarked 'that he believed that a person might get into a fight with several persons and not know when he was hurt, so unconscious was a person of pain while under the influence of said gas;' and the said deponent further remarked, 'that he believes that if a person could be restrained, that he could undergo a severe surgical operation, without feeling any pain at the time,' Dr. Wells then remarked 'that he believed that a person could have a tooth extracted while under its influence, and not experience any pain;' and the said Wells further remarked, 'that he had a wisdom tooth that troubled him exceedingly, and if the said G. Q. Colton would fill his bag with some of the gas, he would go up to his office and try the experiment,' which the said Colton did: and the said Wells, C. F. Colton, and G. Q. Colton, and your deponent, and others at this time unknown to said deponent, proceeded to the office of said Wells; and that said Wells there inhaled the gas, and a tooth was extracted by Dr. Riggs, a dentist then present; and that the said Wells, after the effect of the gas had subsided exclaimed, 'A new era in tooth pulling.'"

Now this testimony does not conflict in the slightest degree with the claims of Dr. Wells, but on the contrary, it is highly

confirmatory of other evidence adduced in support of these claims. It will be recollected that, according to the testimony of Dr. Brocket, he (Dr. Wells) entertained the idea of applying the gas for anæsthetic purposes as early as 1840, and that according to that of Daniel Clarke, Mrs. Wells, and Dr. Riggs, he recurred to the same idea the evening before, that is to say on the evening of the 10th. He said to Mrs. Wells in returning home, that he intended to have a tooth extracted the suceeding day, while under the influence of the gas, and then he went from his own house direct to Dr. Riggs' office, and there discussed the subject fully, and arranged with him for the experiment in conformity with the purpose avowed to Mrs. Wells. Mr. Cooley then is a little too late in his claim of originality in consequence of what he said on the morning of the 11th. No doubt he is ambitious to figure as an accoucher at the parturition of this important idea, but he was a little too late, it was born into the world the evening before. But suppose it were otherwise, what does his remark amount to. Was it anything more than the suggestion of a possibility. Dr. Wells, on the other hand, expressed a belief, and proceeded to illustrate the sincerity of that belief by an experiment on himself. Did Cooley make any such experiment, or attempt to make anæsthesia practical in any form? How much importance should be attached to the silly pretensions of Cooley will appear from the following:

Extract from the deposition of John M. Riggs.

"And I further say, I never knew or suspected that Samuel A. Cooley, of this city, claimed to have suggested, originally, to Dr. Wells the use of the gas in dentistry, until he (Mr. Cooley) gave a deposition, which was forwarded to Washington at the last session of Congress, when he said he first suggested the idea to Dr. Wells, and he (Dr. W.) made the experiment in consequence. I then said to him, *Mr Cooley you are not going to claim this discovery away from Dr. Wells?* He said *no, by no means.* I then said, *I hope you are not going to try to rob him of it? He said no, I have been written to to forward my deposition to Washington, and I shall send it in support of the claim of Dr. Wells*, or words to that effect.

"In the first instance, Dr. Wells was in the habit of sending to New York for the nitrate of amonia, used by him in manufacturing the gas; afterwards both Dr. Wells and myself obtained this article from Mr. Cooley, and in consequence we were in the habit of frequent intercourse with him for a period of two or three years, during which he (Mr. Cooley) never intimated that he suggested to Dr. Wells, originally, the use and availability of this agent in dentistry."

Dr. Riggs is mistaken in saying that Cooley swears that he first suggested the idea to Dr. Wells, and that he (W.) made his experiment in consequence. He only says that he suggested a

possibility on the morning of the 11th, when Dr. Wells had reached the point of full belief the evening before. In other respects Cooley agrees perfectly with Dr. Riggs; they testify in coincidence to the administration of the gas—its effect—the extraction of the tooth, and even to the exclamation, "*a new era in tooth pulling*," made by Dr. Wells on recovering his conciousness.

Dr. Morton prints in the appendix to his book, pages 3, 4, 5, 6, 7, and 8, a letter from himself to Cooley, and a long reply from the latter, which is nothing but a tissue of misrepresentations. He (C.) has not seen fit to swear to these new statements, probably from a discreet reference to the pains and penalties which the law attaches to the crime of perjury. Morton says, in his letter to Cooley, that he addresses him "for the purpose of drawing from him, upon the several points contained in his statement," (referring to his deposition,) "more precise and definite information than it at present conveys." It appears that Morton has been several times in Hartford of late; why did he not get his friend Cooley, the new-born discoverer of anæsthesia, to swear to this "more precise and definite information"? The production of a mere letter from Cooley, under such circumstances, savors a little too much of artifice, not to say fraud, to commend the case of Dr. M. to the confidence of upright men.

The next resort of Dr. Morton is to an allegation of unfairness in taking testimony, at Hartford, in support of the claims of Dr. Wells. He seems to indulge sentiments of resentment and bitterness towards Dr. Ellsworth, who is one of the most upright of men, and has committed no other offence than that involved in efforts to elicit the truth, in aid of the deliberations of the committee and of the two Houses of Congress. At p. 9 of this book, Morton says: "Dr. Ellsworth, one of the three principal witnesses relied on, is little else than the actual party concerned," and refers to the deposition of Mr. Horace Cornwall, (his lawyer,) to justify this imputation. What is meant by the suggestion that there are three principal witnesses, of whom Dr. Ellsworth is one, it is not important to consider. It is true, the testimony of Dr. Ellsworth is believed to be important, but it is not by any means as much so as that of several other witnesses. On turning, however, to the deposition of Cornwall, we find allegations against Dr. Ellsworth, in substance, that he took some part in the examination and cross-examination of witnesses in favor of the Wells family, and finally concurred with their counsel in denying him (Mr. Cornwall) the privilege of attending to cross-examine witnesses examined in support of the Wells claim.

Dr. Ellsworth has forwarded his deposition in response to these allegations, from which it appears that he has taken some part in the examination, prompted by commisseration for a defenceless family. He is moreover perfectly familiar with the whole controversy and could better conduct the inquiry than counsel who are comparatively strangers to the subject.

With respect to the exclusion of Mr. Cornwall, it appears his conduct was so procrastinating and vexatious that it was indispensable. Dr. Ellsworth says that he himself was under examination before Mr. Smith, the commissioner, nearly a week, and that on one occasion he was on the stand until half-past eleven at night; that Dr. Riggs was four days in giving his direct testimony, and that his deposition was sent off to Washington without cross-examination, unsigned, unfinished, and contrary to his remonstrances. "Had Dr. Riggs," says Dr. Ellsworth, "given in all his testimony, it must have occupied from four to six days longer, at the rate the examination had gone on." Under such circumstances the counsel of the Wells family concluded (in which Dr. Ellsworth admits he concurred) that it was impossible to take the testimony by examination and cross-examination, and therefore they adopted exactly the course pursued by Dr. Morton himself, of which he cannot complain. Every part of his testimony is *ex parte*, and much of it is not even sworn to. No notice was given to Mrs. Wells or her son, and no opportunity was afforded them to cross-examine his witnesses, and what is a little curious the calumnious statements of Cornwall himself are *ex parte* and without notice to any one. It is then with a poor grace that Morton complains of the exclusion of his lawyer. Perhaps, before he proceeds much further in arraigning the conduct of others, he had better explain how it is that he should produce to the committee, and endeavor to impose on Congress, a paper purporting to be the deposition of Dr. Riggs, when it was neither completed, signed, nor sworn to.

XI. There remains a matter to be adverted to which will throw much light not only on the claims of Dr. Morton, but also on those of Dr. Jackson, as they stand in competition with the claims of Wells. Both Morton and Jackson have involved themselves in inextricable difficulty by their statements on occasion of their application for a patent for their pretended discovery. It will be found that such statements are utterly at war with the claims which they have since been urging in opposition to each other, and equally at war with those which they are now urging in opposition to Wells. The following papers will bring this branch of the subject fully before us:

Copy of the Schedule or Specification annexed to the letters patent issued to William T. G. Morton, on assignment of Charles T. Jackson of all his interest in the thing patented, which letters are dated November 12, 1846.

To all persons to whom these presents shall come: Be it known that we, Charles T. Jackson and William T. G. Morton, of Boston, in the county of Suffolk, and State of Massachusetts, have invented or discovered a new and useful improvement in surgical operations on animals, whereby we are enabled to

accomplish many if not all operations, such as are usually attended with more or less pain and suffering, without any or with very little pain to or muscular action of persons who undergo the same; and we do hereby declare that the following is a full and exact description of our said invention or discovery.

It is well known to chemists that when alchohol is submitted to distillation with certain acids, peculiar compounds termed *ethers* are formed, each of which is usually distinguished by the name of the acid employed in its preparation. It has also been known that the vapors of some if not all of these chemical distillations, particularly those of sulphuric ether, when breathed or introduced into the lungs of an animal, have produced a peculiar effect on its nervous system—one which has been supposed to be analogous to what is usually termed intoxication. It has never (to our knowledge) been known until *our discovery* that the inhalation of such vapors, particularly those of sulphuric ether, would produce insensibility to pain, or such a state of quiet of nervous action as to render a person or animal incapable to a great extent, if not entirely, of experiencing pain while under the action of the knife or other instrument of operation of a surgeon calculated to produce pain.

This is *our* discovery, and the combining it with or applying it to any operation of surgery for the purpose of alleviating animal suffering as well as of enabling a surgeon to conduct his operation with little or no struggling or muscular action of the patient and with more certainty of success, constitutes *our invention.* The nervous quiet and insensibility to pain produced on a person is generally of short duration, the degree or extent of it or time which it lasts depends on the amount of etherial vapor received into the system and the constitutional character of the person to whom it is administered. Practice will soon acquaint an experienced surgeon with the amount of etheric vapor to be administered to persons for the accomplishment of the surgical operation or operations required in their respective cases. For the extraction of a tooth the person may be thrown into the insensible state, generally speaking, only a few minutes. For the removal of a tumor or the performance of the amputation of a limb, it is necessary to regulate the amount of vapor inhaled to the time required to complete the operation. Various modes may be adopted for conveying the etheric vapor into the lungs. A very simple one is to saturate a piece of cloth or spunge with sulphuric ether and place it to the nostrils or mouth so that the person may inhale the vapors. A more effective one is to take a glass or other proper vessel like a common bottle or flask, place in it a sponge saturated with sulphuric ether, let there be a hole made through the side of the vessel for the admission of atmospheric air, (which *hole* may or may not be provided with a valve opening downwards so as to allow the air to pass into the vessel,) a valve on the outside of the neck opening upwards to another valve in the neck and between that last mentioned, and the body of the vessel

or flask, which latter valve in the neck should open towards the mouth of the neck or bottle. The extremity of the neck is to be placed in the mouth of the patient, and his nostrils stopped or closed in such manner as to cause him to inhale air through the bottle and to inhale it through the neck and out of the valve on the outside of the neck. The air thus breathed by passing in contact with the sponge will be charged with etheric vapors, which will be conveyed by it into the lungs of the patient. This will soon produce the state of insensibility or nervous quiet required.

In order to render the ether agreeable to various persons we often combine it with one or more essential oils having pleasant perfumes. This may be effected by mixing the ether and essential oil and washing the mixture in water. The impurities will subside and the ether impregnated with the perfume will rise to the top of the water. We sometimes combine a narcotic preparation, such as opium or morphine, with the ether. This may be done by any ways known to chemists by which a combination of etheric and narcotic vapors may be produced.

After a person has been put into a state of insensibility as above described, a surgical operation may be performed upon him without, so far as repeated experiments have proved, giving to him any apparent or real pain, or so little, in comparison to that produced by the usual process of conducting surgical operations, as to be scarcely noticeable. There is very nearly if not entire absence of all pain. Immediately or soon after the operation is completed, a restoration of the patient to his usual feelings takes place without, generally speaking, his having been sensible of the performance of the operation.

From the experiments we have made we are led to prefer the vapors of sulphuric to those of muriatic or other kind of ether, but any such may be employed which will properly produce the state of insensibility without any injurious consequences to the patient.

We are fully aware that narcotics have been administered to patients undergoing surgical operations, and, as we believe, always by introducing them into the *stomach*. This we consider in no respect to embody our *invention*, as we operate entirely through the *lungs* and *air passages*, and the effects produced upon the patient are entirely or so far different as to render the one of very little while the other is of immense utility. The consequences of the change are very considerable, as an immense amount of human or animal suffering can be prevented by the application of our discovery.

What we claim as our invention is the hereinbefore described means by which we are enabled to effect the above highly important improvement in surgical operations, viz: by combining therewith the application of ether or the vapor thereof substantially as above specified.

In testimony whereof we have hereunto set our signatures this twenty-seventh day of October, A. D. 1846.

CHARLES T. JACKSON,
WILLIAM T. G. MORTON.

Witnesses:

R. H. EDDY,
W. H. LEIGHTON.

Copy of the affidavit or oath appended to the foregoing specification, as the same appears on the files of the Patent Office.

STATE OF MASSACHUSETTS, }
County of Suffolk. } *ss.*

On this 27th day of October, A. D. 1846, personally appeared before me the above named Charles T. Jackson and William T. G. Morton, and made oath that they do verily believe themselves to be the original and first inventors of the improvement herein above described; that they do not know or believe the same to have ever before been known or used, and that they are citizens of the United States of America.

R. H. EDDY,
Justice of the Peace.

Copy of the assignment by Charles T. Jackson to Wm. T. G. Morton, of all his right and interest in the above discovery, taken from the Patent Office.

To all persons to whom these presents shall come: *Whereas* I, Charles T. Jackson, of Boston, in the State of Massachusetts, chemist, have, in conjunction with William T. G. Morton, of said city, dentist, invented or discovered a new and useful improvement in surgical operations on animals, whereby we are enabled to accomplish many if not all operations, such as are usually attended with more or less pain and suffering, without any, or with very little, pain or muscular action to persons who undergo the same; and whereas, the said Morton is desirous of procuring a patent on the same, and, as I believe, cannot legally do so without my signature to the specification and application; and whereas I am desirous of benefitting him, and not to be interested in any patent—

I have therefore, in consideration of one dollar to me in hand paid, the receipt of which I do hereby acknowledge, assigned, set over, and conveyed, and by these presents do assign, set over, and convey to the said Morton and his legal representatives all the right, title, and interest whatever which I possess in the said invention or discovery, a specification of which I have this day signed and executed in conjunction with him, for the purpose of enabling him to procure a patent thereon.

And I do hereby request the Commissioner of Patents to issue the said patent to the said Morton, *in his name* and as my assignee or legal representative, to the extent of all my right, title, and interest whatever in the said invention or discovery.

In testimony whereof, I have hereto set my signature and affixed my seal, this 27th day of October, 1846.

CHARLES T. JACKSON. [L. S.]

Witness: R. H. EDDY.

[Received and recorded November 10, 1846.]

The facts disclosed by these papers invite the following remarks:

1. It appears that Charles T. Jackson and Wm. T. G. Morton, on the 27th day of October, 1846, united in representing to the Patent Office that they had discovered anæsthesia, and that the same was the product of their joint labors, efforts, and sacrifices. They addressed the Commissioner in the following language: "*We*, Charles T. Jackson and Wm. T. G. Morton, of Boston, in the county of Suffolk, and State of Massachusetts, *have invented or discovered a new and useful improvement in surgical operations*," and then, throughout the paper, they speak of "*our invention*," *our discovery*, and "*we*" do this thing, and "*we*" do the other, concluding thus: "*What we claim as our invention is*," &c. There is, therefore, in these papers, a most formal asseveration that they (Jackson and Morton) were jointly concerned in making this discovery, and that it was not the sole product of the labors of either, but that by a copartnership of skill, ingenuity, and ability, they had obtained this highly important result. But we have something more than mere statements, for they make solemn oath to the truth of these avowments. They swear that "*they do verily believe themselves to be the original and first inventors of the improvement*," &c. They do not swear that Dr. Jackson made it alone in the winter of 1841–'42, when, according to his own account of the matter, he resorted to the vapor of ether to allay the irritation of his throat, occasioned by the inhalation of chlorine gas. Nor, that Morton made it, September 30, 1846, when he extracted the tooth of Eben Frost, but that they had conjoined their powers, and, entering this important field of inquiry, had been enabled, by the assistance and support which they had mutually rendered each other, to make the improvement or discovery which they describe and set out at length. In order, as it would seem, to put the matter of copartnership of ingenuity and talent beyond all doubt, Dr. Jackson takes care to inform the world in his "deed of assignment" (also dated October 27) that he had made this great discovery "*in conjunction*" with Morton. The language is this: "I, Charles T. Jackson, of Boston, in the State of Massachusetts, chemist, *have, in conjunction* with Wm. T. G. Morton, dentist of said city, invented and discovered a new and

useful improvement," &c. And Morton, in accepting such a deed of assignment from Jackson, and in claiming under it, admits he, also, in investigating this matter, acted in conjunction with Jackson. There was, then, on and before the 27th day of October, "a conjunction" between Charles T. Jackson and Wm. T. G. Morton, but it is believed there has been very little "conjunction" since. No sooner had they stated and sworn in effect that neither of them could properly claim the discovery as exclusively his own, but that it was the product of their joint diligence, skill, learning, and ability, than they turned upon each other and commenced a war of extermination, which they are pursuing to this day. They now insist that all their representations to the Commissioner, including the oath which involved the idea of mutual participation and joint labor was false. Dr. Jackson brings forward a large mass of testimony from witnesses of the first respectability and of unquestionable rectitude, which proves conclusively that Dr. Morton is not entitled to the slightest credit for the discovery, and that every thing he did in the application of ether for the purpose indicated was based on information derived from him, (Dr. J.) On the other, Dr. Morton produces another mass, even more voluminous than that adduced by Dr. Jackson, by which he proves with equal clearness that his (Dr. J.) pretensions are groundless; that his experiments with sulphuric ether in the summer and fall of 1846, were his own, and were conducted at his own expense and responsibility, without any essential aid from Jackson. It is believed that lovers of truth and justice can look on while this war is raging with entire composure; if the result is mutual annihilation, so much the better—that will leave Horace Wells, the true discoverer of ansæthesia, the sole occupant of the field.

2. In this connexion it becomes necessary to take some notice of the grounds assumed by the minority of the select committee of the House in respect to the relative merits of Wells and Jackson. The following extract from the report of the Hon. Mr. Stanly, page 56, is all that is material:

"The undersigned feels it due to the claims of Mr. Wells, to state, that he has not examined the evidence before the committee on his behalf with much care. The papers were referred to a member of the committee, whose views are probably incorporated in the report of the majority. But if all that Mr. Wells' friends urge, is susceptible of being proved, the undersigned is satisfied from the evidence that Dr. Jackson's discovery was made long before Wells claimed that he knew anything of the power of ether in rendering the system insensible to pain under surgical operations."

Mr. Stanly, no doubt, endeavored to give the subject an impartial and upright consideration, but his mind seems to have been almost entirely absorbed by the conflicting pretensions of Jackson and Morton. Mr. Evans, the other minority member, concurred with him in supporting the pretensions of Jackson, but

took no notice of the claims of Wells. It is to be hoped that these honorable members will review their opinions, and consider how they can reconcile the idea of priority by Jackson with his representations under oath to the Patent Office, "*I, Charles T. Jackson, of Boston, in the State of Massachusetts, chemist, have, in conjunction with Wm. T. G. Morton, dentist, invented or discovered a new and useful improvement*," &c. Now there could have been no "conjunction" between the "*chemist*" and "*dentist*" to make this improvement or discovery until the summer of 1846. It is admitted on all hands that Morton did not turn his attention to the subject until that period. He has at all times so avered, as he does now. All the witnesses, and they are many, who speak of the initiation, progress, and consummation of his labors, comprise them within the summer and fall of 1846. There could, then, have been no "conjunction" of these brilliant stars of anæsthesia at an earlier period. It is difficult to see how Dr. Jackson is to be rescued from this dilemma. In saying and swearing that he made this discovery with the assistance, and by the co-operation of Morton, he in effect admits he had not consummated it until the fall of 1846. And this accords with the exact truth. It is impossible to believe that he had formed a distinct conception of anæsthesia as early as the winter of 1841–2, when it is admitted that he did not bring it to the test of experiment in five long years. He did not make the slightest effort to introduce anæsthesia into dental or surgical practice, but kept the whole thing locked up in his own breast, unless the circumstance of mentioning it casaully to a few of his friends ought to qualify the remark. It is a settled principle that a mere discovery lays no foundation for a claim of merit. Discovery must be made practical so far as the nature of the subject admits. Publicity is also an important element, and it should be early publicity to render a claim clear and unquestionable. Indeed there is a species of guilt in making such a discovery as this and keeping it a secret for a long time. A man who does so can in no sense be deemed a public benefactor, and least of all, should he be permitted to supercede one who has not only conceived ideas, but made them practical, and given them instantly to the world. As between Jackson and Morton, the speculations of the former, (for we hold them to have been nothing more,) from 1841 to 1846, may have some weight. They would seem to render probable the statements of his witnesses, that he communicated to Morton full information as to the effects of sulphuric ether, and that he (M.) acted in experimenting with that substance under his instructions and on his responsibility. To bring forward, however, loose remarks and speculative suggestions, in opposition to the claims of a practitioner of anæsthesia from 1844 and onward, is preposterous to the last degree. The question of priority, then, as between Jackson and Wells, must, *on the word and oath* of the former, be decided in favor of the latter.

XII. But it may be insisted, as it was at the last session, that Dr. Morton has obtained a patent, and that his discovery having been used in the army and navy of the United States, it is but reasonable he should be compensated therefor; the Government should buy out the patent, and thus secure the free use of the thing patented, not only in the army and navy, but to the public generally. To this it is sufficient to say, that a patent is only *prima facia* evidence of right, and that priority established, as in this case, in favor of another party, makes the patent void. The application for the patent was *ex parte*. Dr. Wells was not present and had no notice to be present—it was a proceeding behind his back, and therefore cannot conclude his rights for a moment.

It is believed that the discovery, by whoever made, is not patentable. Dr. Morton produces a contrary opinion from the late Mr. Webster, but it is submitted that the following considerations must conduct us to other results:

1. Sulphuric ether was known as a remedial agent long before any of these parties claim to have made this discovery. Dr. Morton admits this in his memoirs to the French Academy. "I became satisfied," he says, "that there was nothing new or particularly dangerous in the inhaling of ether; that it had long been the toy of professors and students, known as a powerful anti-spasmodic, anodyne, and narcotic, capable of intoxicating and stupefying when taken in sufficient quantity."

2. Dr. Morton does not pretend to have discovered a new method of administering this old remedy; his method is inhalation, which he says, as above, is not new.

3. He has not, by a combination of a new element with this well-known remedy, caused it to produce a new effect. It is the same old remedy administered in the same old way, and producing the same old effect. Dr. Morton admits, as above, that it had long been "known as a powerful anti-spasmodic, anodyne, and narcotic, capable of intoxicating and stupefying when taken in sufficient quantity." All he claims is, that he has found out that this intoxicating and stupefying effect is much more extensive than was supposed before his discovery; that it will paralyze the nerves of sensation so that surgical operations can be performed without pain. Whoever before heard of patenting a mere discovery of an effect of medicine, or rather of the extent of a well known effect. Not even the great name of Mr. Webster can make such a proposition law. The true principle is stated by Bulwer, J., 2 H. Blk., p. 487, as follows:

"Suppose the world were better informed than it is, how to prepare Dr. James' fever powders, and an ingenious physician should find out that it was a specific cure for consumption, if given in particular quantities, could he have a patent for the sole use of James' powder in consumptions, or to be given in particular quantities. I think it must be conceded that such a patent would be void, and yet the use of the medicine would be new,

and the effect of it as materially different from what is now known as life is from death. So in the case of a late discovery, which, as far as experience has hitherto gone, is said to have proved efficacious. That of the medicinal properties of arsenic, in curing agues; could a patent be supported for the sole use of arsenic in aguish complaints? The medicine is the manufacture and the only object of a patent, and, as the medicine is not new, any patent for it, or for the use of it, would be void."

Only a few items remain to be noticed, and then we will hasten this exposé to a conclusion.

"*Boston*," says the House committee of the last session, in speaking of Morton's supposed discovery, "*was proud of its maternity.*" We fear this sentiment may have had an effect in giving Dr. Morton some support, which he would not have otherwise received. Even the truly able and excellent gentlemen connected with the Massachusetts General Hospital may have been unconsciously influenced by a claim to have anæsthesia considered an emanation of their institution. We are glad, however, to find there is at least one of the surgeons of that hospital who has so far looked into the merits of the case as to become convinced of the high claims of Horace Wells to the gratitude of mankind. We produce here a letter from C. H. Haywood, M. D., of Boston, Massachusetts, who was house surgeon of the above hospital at the time Dr. Morton tried his experiments there, and whose name is prominently presented in the case of Dr. Morton:

"New York, *January* 14, 1853.

"Dear Sir: I comply very cheerfully with your request, and herewith send you some 'thoughts on the ether controversy.' From the position which I happened to occupy when Morton first applied ether to surgery, in the Massachusetts General Hospital—from my having assisted at the first operation, of any magnitude, ever done under the influence of an anæsthetic agent, and been, consequently, more or less mixed up with the controversy, you may have supposed that I had some *facts* in my possession bearing upon the disputed points. But the truth is, the whole ground has been so thoroughly worked over, that I have nothing to communicate but a few considerations which have influenced my own mind, based upon facts well known and acknowledged by all parties; and to plunge at once, *in medias res*, the present state of the business seems to be this: Several parties lay claim to remuneration from Government, and the everlasting gratitude of all mankind, on the ground of having severally and independently discovered and perfected a means of lulling sensibility during surgical operations. Now I do not believe that any one party has a right to a claim like that. For there is a probability from analogy, made a certainty by documentary evidence that this discovery, like almost all other great discoveries, was the offspring of several brains, and was gradually brought forth. It was no Minerva born with one blow. Moreover, in analysing the *nature*

of the discovery, we can detect several elements which were successively brought to light.

"Thus we observe, in the first period, an indefinite search after *some* method of producing insensibility to pain, and animal magnetism was tried and failed, opium and other anodynes were then made use of, but the result was unsatisfactory. Then came a *second period*, where great advance was made which is, beyond all dispute, due to Dr. Horace Wells; in this period was made known the great fact, that substances applied to the pulmonary surfaces by inhalation produced a sudden and concentrated effect quite different from that of the same agents taken into the stomach. This method of administration required that the substances should be in a state of vapor or gas: and Dr. Wells soon discovered by experimentation that certain intoxicating agents would produce, when inhaled, insensibility to pain, and this was the first important step in the history of anæsthesia.

"The question of priority may be easily settled. It is satisfactorily proved that Dr. Wells' experiments had established the abovementioned points as early as October, 1844, though they had not determined either the best agent, or perfected the method of administration in detail. But this question will be attended to in a moment. It is well known that Dr. Morton was a student in Dr. Wells' office, and witnessed these experiments, yet the administration of ether to the first case of surgery in the Massachusetts Hospital, did not take place till October, 1846, as appears by my own letter to Dr. Morton, which has been cited in all the histories of the controversy as evidence that I supported all the claims set up by Morton. What my real opinion is, and always has been, you shall soon see. In the third period, the anæsthetic properties of certain substances were discovered. First nitrous oxyd was tried, then sulphuric ether, then chloroform, then chloric ether. These discoveries were all made by different individuals, and their relative value and safety has not yet been finally determined by surgeons. In one hospital you will find, at the present time, nothing used but chloroform, at another chloroform is regarded as dangerous, and chloric ether is substituted, while in very few is sulphuric ether ever used. Now for which of these agents, and to which discoverer, shall remuneration be granted? To each, and for all, I say. To Dr. Morton for sulphuric ether, to Dr. Simpson for chloroform, to Dr. John C. Warner for chloric ether, but before all, let full and ample justice be done to that noble genius which first conceived the grand idea, which has been the basis of all the experiments, and the father of all the discoveries. To the spirit of Dr. Horace Wells belongs the honor of having given to suffering humanity the greatest boon it ever received from science.

"With sentiments of respect and esteem,

"I remain your obedient servant,

"C. H. HAYWOOD, *M. D.*

"*Formerly House Surgeon of the Mass. Gen. Hospital.*

"Mr. Brooks."

It is satisfactory to find that other distinguished professors and practitioners of surgery, in different parts of the country, concur fully with Dr. Haywood in assigning to the claims of Dr. Horace Wells, a marked pre-eminence over those of his competitors, as witness the following letter from Professor R. D. Mussy of Cincinnati, Ohio—

"CINCINNATI, *December* 24, 1852.

"DEAR SIR: I have received your letter. I do not know whether my affidavit, in the matter of Dr. Morton's application to Congress for a reward of his alleged discovery of the anæsthetic properties of ether, would be of any value. I have long regarded Dr. Wells as entitled to the credit and the pecuniary reward, if any such consideration is to be made for the invaluable discovery of anæsthesia in surgical operations, and if he has left a family I would hold up both hands to induce Congress to provide for them. If anything I can say in truth will promote this object either directly or indirectly I am willing to say it.

"Very respectfully, yours,

"R. D. MUSSEY.

"Hon. T. SMITH, *U. S. S.*"

In 1847 the General Assembly of Connecticut explicitly recognised Dr. Wells as the discoverer of anæsthesia, and declared that he was entitled to the favorable consideration of his fellow-citizens, and to the high station of a public benefactor. In March last the court of common council of the city of Hartford passed resolutions to the same effect. The whole medical corps of the same city have united in testimonial in favor of the claim of Dr. Wells, and many of them have stated material and important facts and declared their belief in the priority of Dr. Wells under oath. Besides this no less than one thousand citizens of Hartford, many of the highest station in society, judges, lawyers, divines, physicians, merchants, and indeed men of every class, have memorialized Congress at the present session, praying for a favorable appreciation of the case of Dr. Wells. But a fact more significant than all these may be found in the auspices under which the memorial of Charles Thomas Wells now comes before us. He is a youth of tender years and having no guardian is obliged to address Congress by his next friends. And he has found friends indeed in the Right Rev. J. C. Brownell, Bishop of the Protestant Episcopal church of the Diocese of Connecticut, and the Hon. Thomas Scott Williams, late chief justice of the Supreme Court of the same State, at once alike venerable for their years and venerated for a long life of private virtue and public usefulness. Nothing but a high sense of the justice and rectitude of the pretensions which Doctor Wells urged in his lifetime, and which his family insist on now, could have induced them to extend

to those pretensions the patronage of their exalted names, station, and character. The subjoined deposition will show that Bishop Brownell has a personal knowledge of the subject:

"I, Thomas C, Brownell, of the city and county of Hartford, depose and say, that: On, or about the first of January, 1848, my daughter, Frances J. Brownell, had five teeth extracted by Dr. Riggs, a dentist of this city; she being, at the time, under the influence of nitrous oxyd gas, administered to her by the late Dr. Wells. I was present at the operation, and saw no evidence that my daughter was conscious of suffering, and she told me afterwards that she felt no pain during the operation. A few weeks afterwards she had three more teeth extracted, while under the influence of ether, and with little appearance of suffering, though she thought it less genial in its effects than the nitrous oxyd gas, and such was my own judgment of its operation.

"T. C. BROWNELL."

Sworn before HENRY L. RIDER, *N. P.*

The case of the unfortunate Horace Wells is now before us—of that man who did more for suffering humanity than any one else from the days of Jenner, and who, had God spared his reason and stayed the hand which cut the thread of life, would at this moment be the acknowledged author of anæsthesia throughout the civilized world, and associated in the same bright gallaxy with Jenner and other illustrous benefactors of mankind. Shall imposture be permitted to usurp the place of merit; shall ignorance and presumption overtop all the emanations of true genius, and all the promptings of a generous, noble, and self-sacrificing spirit; shall artifice, chicanery, and mendasity stand before sincerity, rectitude, truth, and honor; and shall an attempt to commit a piracy on the reputation of the dead, and to rob the widow and the fatherless of what they deem a priceless jewel be held in as high esteem as the memory of one who consecrated all his best faculties and utmost energies to an alleviation of the keenest pangs of humanity, and who went down to the grave a victim alike to his success, and to the opposition which that succes prompted. Until these things happen there can be no failure of justice for the family of Horace Wells.